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PLUS

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LAST CHANCE: Win a **VINTAGE** train set! – page 42

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With smooth painting and crisp detailing, Atlas® ready-to-run HO & N scale Coalveyor Bathtub Gondolas are modeled after cars that were built by ACF® in the 1980s to deliver coal to power plants. Featuring a die-cast chassis, interior bracing, a removable coal load, and more, these cars are sure to add "power" to your railroad fleet.

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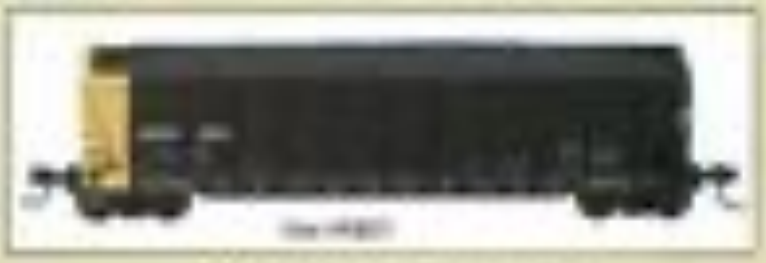

20004	Industrial
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ATLAS

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THE SOUND OF AN ALL-NEW DC EXPERIENCE

QUANTUM ENGINEER™ CONTROLLER – NEW!

The New Quantum Engineer™ Controller allows DC users of Atlas Master Gold Series locomotives to utilize all of the DSP "Quantum System" sound features that were previously available only to users with DCC-equipped layouts. Now, in addition to the horn and bell sounds, you can access all of the different engine settings and effects such as number board lights, flange squeal, dynamic brakes, coupler sounds, blower/fans, reverser lights and more!

In addition to these sound and lighting features, DC users are now able to access other advanced features such as programming options, locomotive braking, locomotive shutdown and startup procedures, reduce wide speed motion and more!

NEW!

Incredibly easy to setup! Simply wire the Quantum Engineer™ Controller between a standard DC power pack and the track. No other special equipment or wiring is required!

Enjoy the golden experience of HO sound on your DC layout by heading down to your local hobby store and getting yours today!

Note: The Quantum Engineer Controllers are designed to operate locomotives that have QAMC (Quantum Analog Remote Control) technology. Except for simple horn and bell operations, the Quantum Engineer Control is not suitable for older Quantum-equipped engines that do not have QAMC technology included.

QAMC technology is included in all Atlas, Model Power, DCC and Middleton® Gamble sound-equipped locomotives. The more recent locomotive releases from Broadway Limited Imports (BLI) can also be operated this includes the PRR K-4s, GMD E-Series Passenger Units, EMD SD40-2, C&O F-7 diesel locomotive, EMD Switchers, etc. BLI locomotive releases previous to these as well as the Lionel® Challenger and Steam Turbine will not operate with the Quantum Engineer™ Controller.

ITEM#	DESCRIPTION
70	Quantum Engineer™ Controller

FOR HO SCALE!

VISIT YOUR LOCAL HOBBY STORE TODAY!

ATLAS

UP 'DD40X' and Steel Cupola Cabooses

OVERLAND

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03/05 Volume 75, Number 03

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A light look at our hobby
by David Popp

Coming next issue: Three great mid-sized model rail roads, including Dave Mike's turn-of-the-century HO scale Pacific ▮ Index Numbers.

Diesel bios?

We at Garden Railways have talked many times about [redacted] above a permanent diesel loco or not stayed. [redacted] have also been fantastic proponents of a loco-centred electric summer garage, oversized garage, and why on every other thought I loved. It is [redacted] and [redacted] have a fully-lighted interior ... so [redacted] this first number 12 look, don't we.

[redacted] hard to see old days. There was even a [redacted] to be used in the pages of GR. The [redacted] flower when many living books there have had something in the with that. However, I can't look at this for a moment.

Several years ago, garden railroaders had the fortune [redacted] to choose from, and those were all steam models made in narrow gauge engines. This was all [redacted]. Then came the next [redacted] the velocity of large-scale trains and gardens railroading, and they [redacted] devoted to six in their [redacted]. They have models of narrow gauge prototypes.

[redacted] the market in [redacted] a long time. Work along [redacted] locomotives, and others who have a good thing share here was in [redacted] narrow-gauge competition, so the smallest people on our railroad just took more narrow gauge steam locos. Then [redacted] introduced two new versions tonight. Then one of mine the on my things are impressive versions. [redacted] scale locos now run more rolling stock versus here, but there was nothing more awesome as you [redacted] the tallest two questions here was to measure parts shipped just somebody. But a long was the tallest was the engine in motor. [redacted] design has appeared on the cover of [redacted] Railroads issue [redacted] was [redacted] engine [redacted], grace the huge majors garden railroading become known as a [redacted] narrow gauge modeling.

We look at the model scale: in 1:20.32 and 1 inched gauge was two work in the moments. Starting in [redacted] 1990, anybody [redacted] railroading was the order of the day. So that wasn't the time to [redacted] railroading at all? In fact, I think it was [redacted]. The difference was that in large scale railroad scale you [redacted] standard gauge [redacted]. It wasn't just [redacted] and take that feature – introduced their standard gauge [redacted] the one scale of 1:20.32 and [redacted] more practical. Every space on our collective [redacted].

Today, we have [redacted] growing awareness of small locomotives and alternative modern live rolling stock. And we have more the same magic as ever, in just a [redacted] metaphor. The interest in [redacted] railroading is on the increase. And even garage modeling, while not [redacted] is showing no signs to die. In finding projects [redacted] railroads displayed on the cover of GR these issues last year, and we've got some [redacted] we've [redacted] coming up.

There are two facts. One [redacted] GR is to [redacted] and the hobby as we see it – the magazine is a reflection of what [redacted] doing and likes. I [redacted] of personal belief. The magazine has really influenced the path of the hobby. It is [redacted] the hobbyists, who has the most influence. As garden railroading changes – as it has [redacted] and as the magazine will change. They haven't changed [redacted] for interesting.

Garden RAILWAYS

[redacted]

GET YOUR FREIGHT FLEET HOPPING

Atlas HO 2-Bay Offset Side Hoppers – New Road Names & Road Numbers!

ATLAS

We've got steam!

DIVISION POINT

News&Products

N scale Atlas RS-1. Atlas O is offering new paint schemes on its ready-to-run plastic pilot motor Rs-1 road switcher. These models have dual motors, directional lighting, an operating smoke unit, and internal con sockets for a Digital Command Control decoder. The models come decorated for Ann Arbor, Belfast & Sandy Fe, Chesapeake & Ohio, Chicago & North Western, Morristown & Erie, New York, New Haven & Hart ford, and Washington Terminal. Made by Atlas O, the RS-1s cost for $479.95 each.

Horizon Hobby purchases Model Die Casting

On June 14, 2004, Horizon Hobby, Inc., announced that it had purchased Model Die Casting Manufacturing, a Carmel City, formally based manufacturer of N and HO in the locomotive and rolling stock.

Highlighted in this issue

- Atlas's N scale Rs-1 switcher
- Intermountain Railway Co.'s HO scale log skidder
- Rivarossi's new Northern
- Kadee's N scale Hi-Rail wheelsets
- Manufacturers react to the Lionel's Appeal Products

Founded in 1958, Model Die Casting was originally known as Die Brandhaven. The firm's currently owned president, Clarence Brandhaven, purchased the company in 1999 and is confident that MDC Roundhouse is in good hands. "Brandhaven and MDC have always been the cream of the crop," he said. "The best part of this arrangement is that we will soon control Horizon Hobby."

Brandhaven officials say MDC Roundhouse's name will not change, and though it will likely relocate to the new plant in Champaign, Ill., the Brandhaven model trains will be made with new plastic and brass and plastic model kits. The new purchase follows Horizon Hobby's acquisition of Atlas O, in January 2004.

For more information visit the MDC Roundhouse Web site at www.mdcroundhouse.com/general/general.htm. Kyle Cronin and Craig Fruin, Model Railroader

Lionel appeals verdict

Last month we reported that Lionel Trains was awarded more than $40 million in a trademark case between it and Lionel Corp. over the usage rights of trade names. Lionel is appealing the verdict, and in a statement on LionelTrains.com, Lionel said it is confident "it will be able to prove that we have the strong rights to use this name through ... ongoing product development and design, pricing, promotion, and extensive advertising campaigns."

New HO locomotives from Life-Like

A limited-edition 2-8-0 H-6, Baldwin 60-D, and General Electric U30B and U23B are all coming from Life-Like Products of Niles, Illinois, in late 2004 and early 2005. The 2-8-0s will be part of the firm's Proto 2000 Heritage steam locomotive line. Available road names will be announced as the release date draws closer.

The Alco RS-27 models will be offered as part of the Life-Like Proto 2000 series and will feature sixwheel pilot trucks, front coupler, cross-hatch diesel radiator grilles, and underframes.

The General Electric U30B and U23B models will also be offered in the Proto 2000 line. The U30Bs, based on the Proto 1 series types, will be the first of the new GE models released and will try overcome the problems the Atlantic Coast Line General Electric demonstrators, Illinois Central Locomotive Heritage Unit, displayed for a time, and Wisconsin Rapids.

The U23Bs are based on the Phase II prototypes and will be offered in the following road names: Burlington Northern, Chicago, Burlington & Quincy, Conrail, CSX, Great Northern, Louisville & Nashville, Nebraska, Rock Island, Soo Line, Penn Central, Rock Island, Southern Railway, and Union Pacific. Undecorated versions of both GE models will also be available.

All of the models will be offered in a standard HO version and it is said that Digital Command Control and Sound Value units and road names are subject to change. Watch for more announcements from the additional information as it becomes available.

Corporate changes at Atlas

On June 1, 2004, Atlas Model Railroad Co. and Atlas H.O.R. announced the promotion of two employees. Richard Madden to chief executive officer and Rick Hoyt to chief operating officer. Madden's previous duties can now be the focus of CMD. Before joining Atlas he served most recent and prior to that with Bachmann Industries. Hoyt has been with Atlas for 19 years, most recently serving as the vice president of finance and administration.

In addition the two have named members of the new board of directors, including Thomas W. Foster as chairman, Mark Schaffer, President, Arno Schaffer, President, and Kevin Schaffer, President.

For more information on these recent promotions and appointments, view the Atlas Model Railroad Co. Web site at www.atlas-model-rr.com.

BLI announces Santa Fe 2-10-2s (and a 2-10-4) in HO scale

Broadway Limited Imports will be releasing its Steam Engine Time line of HO scale locomotives in 2005 with three models. The models will feature a Paragon2 sound system which works on DC and DCC and a new prototypically correct bell. The 2-10-2s will be available in three road numbers and the 2-10-4 will be offered in two road numbers. Both will be available painted and unlettered. The manufacturer's suggested retail price for the models is $199.95.

N scale Auto Max car. Here's a ready-to-run model of a contemporary Auto Max 140-foot articulated tri-level automobile carrier. It has a molded plastic body, Accumate magnetic knuckle couplers, and Atlas N-gear caliper-bearing trucks with low profile wheel flanges. The cars are available decorated for Burlington Northern Santa Fe Auto Max with NOM (Jacksonville-Oklahoma City) or CRLS (Los Angeles-Chicago) reporting marks, Canadian Pacific Rail (CP, CSX, Richmond, Fredricton, and Kansas City Southern. Produced by Athearn Inc., the models sell for $39.98 each.

HO scale wiring platform. The assembled and painted wiring platform is a joint project from Intermountain Railway Co. and Tichy Train Group. The detailed plastic model features a Plastic Pull Express drainage. Wiring parts are provided to complete the open-end or combine several models for a longer installation. The structure sells for $49.95.

HO scale wiring platform. The assembled and painted wiring platform is a joint project from Intermountain Railway Co. and Tichy Train Group. The detailed plastic model features a Plastic Pull Express drainage. Wiring parts are provided to complete the open-end or combine several models for a longer installation. The structure sells for $49.95.

HO scale locomotives

Electro-Motive Division (EMD), Antioch, Burlington Northern, Rio Grand Central, Santa Fe, Southern Pacific Central, Conrail, New York Central, Burlington & Southern, and Wisconsin Central. With four detailed dual-mode diesels: EMD F40PH, Alco DL-600 Railroad Co.

Lehigh Valley class RDS 2-8-0 Consolidate. Painted overhead-wire castings and can make with Bowser mechanism. Kalmbach Locomotive Co.

Electro-Motive Division F7A and B-unit locomotives. Many Electric Rail Transportation Authority Metro-North Commuter RR, and undecorated. Die-cast metal body and sprung drive and frame. 5240 engineered models 5240. Imported Models Productions.

Electro-Motive Division F3 A and B units. Includes Tyndall & Santa Fe authentic Kalmbach F3A (10-15-91) and F3B (10-14-91) "super" diesels

Black detector circuit

Fits all scales. Compatible with digital command Control. Bell, short circuit sensing lights, block signals, and sound effects. Can handle up to 8A of current. Requires one.

F3A (10-15-91) and F3B (10-14-91). Intermountain Railway Co.

Electro-Motive Division GP7/GP9/GP18. Burlington Northern, Conrail, and variants and Burlington Northern Santa Fe. Sprung and metal mechanism. Runs less gear can work and Digital Command Control-ready motor. 4700. Bowser Mfg. Co.

HO scale freight cars

Assembly Line. Reproduces of Alloy Wheel double-sided disconnects of America Railroads (AAR) Annual Mail. Decals & other fit-out prep done because Locomotive & Double-Slit fit-out double-sheathed Coated Steel. Railroad Administrations Interior. Model Plate Mount fit-out double-door AAR Interior. Minimum Maximum radii apart ready. Overlock used Tension rods steel rods, and 40lb Printed Gold Interior Body. 1:48 HO scale. Accurail

RTR PCM Hopper Assorts. Assorts one. Popular at Santa Fe of the C-33 Express. The Metal Concrete Cars, Steel, and Steel-Clad Wagons plus "EXPRESS" contract shippers. Offers Full-Custom orders 214-48 each. Ready-to-Run. Accurail Co.

NE-8 caboose. Classic N&W. New Style, Non-Metric & Modern Tender Plate Mount Trucks & Wooden Platforms and underframe

Die M, underframe 214-M, Series 2000. Ready-to-run. Ready Mounted 1:1

Crossover hoppers. Partners Commodities Transportation (RTR) 2,790 cubic foot Wood-Sided crossover hopper (1970-75). Photo-etched brass crossover hopper (1970-75). Bowser single-bay centerbeam flat car for 4,000 cubic foot American Car & Foundry (ACF) Shoving Cover Photo-etched hopper (1970-75), and Santa Fe 40.7 Cubic Foot, two-end hopper (1970-75). Ready-to-run Intermountain Railroad Co.

Assorted cars. Chemical & Commodity Metals Kits 1 boxcar (1970-75). Accessory & Assembly Kit-box 1 boxcar (1970-75), and Work Train, Rail Stores & Electrical Kit 2 coaches covered hopper (1970-75). Ready-to-run. Kadee Quality Products Co.

Chicago Great Western 40-foot boxcars Intermountain Railway Co. models with metal detailed and Kadee couplers. Add to two-pack (1 for prototype, 1/4 plus 40-ft flat car) cars. Ready-to-run. Railroad Shops

Southern Pa. car emergency caboose kits. Includes roofing, small parts, and decals but no cradle or couplers. Two versions, 1/2 inch. Wagner Mfg.

New hobby shops

Washington, Spokane
Hobbytown USA
9023 E. Mission

Ontario, Canada, London
Wellington Hobbies Inc.
910 Wellington Rd. S.

Passenger cars (plastic). N.S. Models/Eden Valley 30-foot single-sliding coach. Many variations planning for cars without air-cond. awnings, $3.95; coach-combine planning for cars with sill-closed vent doors, $7.95; woodgrained combine planning for combine cars, $10.95; drop rods and end grabs, $4.95; molded headers, windows for cars you make/scale, $5.99 to $7.99 set; combine doubles, $8.95; and grab iron bracing and drilling jig, $3.95. Eastern Rail Models, Inc.

Passenger cars (plastic). Roco buildings for passenger car kit-bash, $4.99; commissary car amplifies Roundhouse; Baltimore Steamboat sleeping cars, $4.99; and mail/express cars, $6.99. Athearn's Model Rail Products Ltd.

New York City Subway R-1 transit cars. Model's based on 1930 prototype. Also plans (built with train floor) and underbody (not found

S. 2/2007 / locomotives

Southern Pacific / Rio Grande and narrow gap with trucks as seen at Denver & Rio Grande Western, Iron Mountain, New York, Susquehanna & Western, SP speed lettering, St. Louis Southwestern, and Union Pacific. The pilot steps around motor. Accurate Scale Locos Engineering and Digital Digital Command Control decoders. Prototype-specific versions, $1.5 left. Intermountain Railway Co.

Railway Classics

Blue Bird

Just Released!
Southern Pacific Daylight Locomotives
Robert J. Church

SEND FOR FREE!

BADGER AIR-BRUSH CO.

N scale. Former size can: This trusty Wisconsin & Iron Range 84-ft-ore-class (1-18) ore car has been added to the S Helper Service product line. The highly detailed scale 34-foot steel-sided model has working hopper doors and comes ready-to-run with metal Kadee wheels and couplers. Scale code 1 (0.084" (2) replacement metal wheelsets are included, and the two has mounting holes for scale knuckle couplers. The ore car is reference for the DM&IR and other railroads. Single cars sell for $18.95 each; five-car sets are $1 95.95.

Club offerings

Pittsburgh & West Virginia 80-ton open hopper. Around 140 scale model ship cars has ten $14 plus $5 shipping. Mid Mon Valley Model Railroad Club, 300 Eagle Church Rd., New Kensington, PA 15068.

Modelers decals. Each square on compact disks. Are also contains sheets 1-25 and prints 8 company names $9.95 Check and Mac and PC compatible. $20 plus $4 shipping. Boston & Maine RR Historical Society, P.O. Box 466, Derry, NH 03038.

The Pennsylvania Railroad in Cincinnati. By Rick Tipton and David Stanbrough. 160 pages, includes credits, index, and color and black-and-white photographs. $40. Pennsylvania RR Technical and Historical Society, P.O. Box 1112, Altoona, PA 16603. http://prrt.org/prrt/contact.html

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News & Products

N scale coal factory

Stonefactor listing

HOBBYSHOP COUNTER

Photoscript photo of a WAP (DAR) by Brian Morris. The model was also be one of the first offerings in the new Dapol 00 line.

Dapol launches New "Super 00" Injection-Molded Line

Diminutive Dapol, long known as an exceptionally detailed wood model, is becoming a new one of injection-molded 00 (HO) models under the Dapol 00 label line this year. Announcing its intent into the mainstream arena, Dapol said its initial offerings will include the GB Industrial Series, GWR 0270(4-6), and the UP Trunk Line Express.

The GB Industrial Series models will include BNSF 3 (AAR) & UP 3 (AAR). Each models will include the 0270(4-6) wheelset for UP series. Dapol said the initial offerings, beyond each many other modifications are planned.

...Tower 55 is ... to offer a ... full ... service ... arrangements.

"We're ... very pleased to introduce the Tower 55 division," said Brian Walsh, president of Overland Models, Inc., and Tower 55. "We surveyed our customers a year or so ago and many expressed a desire for models with our traditional accuracy and detail, but in materials that made the models more affordable.

"Tower 55 represents our dedication to quality and opens up opportunities for more modelers to own and enjoy an authentic bit of rail history."

Tower 55 products are designed based on extensive research, on-site inspections and the expertise of the company's team of knowledgeable rail enthusiasts. HO/S and Proto 1/2-scale models are rendered with attention to accuracy and authenticity. All models come equipped with the Digitrax DH and SC2 technology making them ready to enjoy with no additional components required.

The models are handcrafted for unmatched instantaneous. Always for easy-to-use and ... Tower 55 products will be ... above. Any variations of the ... Summit, from Silver Key A-10 in Cincinnati.

"In addition to our dedication to accuracy and detailing," said Walsh, "our long-standing relationships with North American rail road hunter and Tower 55 goes. We're able to bring our customers the opportunities they're looking for models and our ability to go on-site in the design phase means our accuracy is unmatched."

Walsh said the first products are expected late this year. For more information, ... Tower 55 Products' Web ... at www.tower55products.com.

Kato Announces HOPE Superliner Passenger Cars & Amerillo Baggage Car Set in N

Kato ... to ... delivery of its ... HO ... locomotive. The

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P.O. Box 178
Suffield, CT 06078
www.ModelTrainSoftware.com

connectors for the models being built during that time.

Some of these designs were set aside for future development when the model railroad industry developed new standards and technology.

Over the years the company has introduced offset couplers, long and short shank couplers, special application couplers, "scale" couplers, and recently a smaller draft type of coupler.

Kadee's latest release is the No. 148 "Whisker" coupler with a built-in wire centering spring that makes the coupler a simple and clean "original" design.

This wireless spring design is one new to Kadee. It was developed in the late 1980s, but was set aside for future development, when new materials became available to make the design reliable enough to meet the company's quality standards.

The knuckle and coupler head are the same as the Kadee standard No. 5. Kadee plans a "scale" version for this design as well.

The Whisker coupler is all metal, including the wire spring.

Kadee says the new is high tech and advanced couplers, and will not take a set when in a compressed position for any length of time.

The No. 148 is a centered, medium-weight coupler that will ship only under "standard" draft gear boxes. It is designed to match the height and height of the popular No. 5 coupler.

As with other Kadee couplers, it has both "straight-blade" and "delayed action" operation and will function with all of Kadee's HO permanent and electromagnetic uncouplers.

The Whisker centering spring is a thin wire protruding at a "V" angle forward from the pocketing hole at the end of the shank. Because the wire spring is not, the two shanks do make and caution must be taken when handling the coupler.

The couplers are sold in packages of two pairs with draft gear boxes and have a suggested retail price of $4.75.

Model Rail Scenes 48 Rising Co. Issue

Model Rail Scenes has announced the release of its latest HO scale billboard, fencing and landscaping kit scale.

The scene kit contains three structures including a pre-assembled "billboard"

Kadee Releases Three More HO Steel Liberties

Athearn Announces 100th Micro Brewery Car in N

Intermountain Announces Fall Release of N-Scale F-3 and F-7 units

Walthers' New HO-Scale 50' Double-Door Offset-Sash Boxcar Variety

New HO-Scale Pullman-Standard 10-Roomette/6-Double Bedroom Sleeper Variety Features Separate Vents

Top 10 groundcovers for sun

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

Blue rue oxeye makes a rich picture

The bright green foliage of creeping mazus contrasts over the wall of leaf Clearwater Agave in Shelby Redbud near Columbus, Ohio

Hardy ice plant keep bulb thrive form in the low mid bloom about of leaves a the variety of Mark and Fine Rudbeck. Fort Collins, Colorado

A rich sun creeping mazus says light and evolves purple or white snapdragon like blossom.

BACK EMF . . .
RELIABLE, CONSISTENT LOCOMOTIVE MOTOR CONTROL

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Regional gardening reports

All Lines Held on 35th Avenue Level

Question: How do you keep customers from crowding your right-of-way?

Avoid hostile takeovers

Liz Keller, Cape Hen, New Jersey, Zone 7

We are a rare generation that believed that when trees for creating foliage they purchased—then maybe. Sometimes we just use a shrub to keep things like lawn mowers from getting into our right-of-way. Creeping vetch is also effective but plant one crop to keep crop from your trees—it looks good when in an upward bloom, but we do it.

Round 'em up

Mark Evergill, New Chicago, Illinois, Zone 7

We have three problems with plant encroaching onto the tracks because of our original design, which included large trees and bird turnout. When needed, I occasionally use weed killer, but spraying flowering vines the invasive kind, and also we have to a few gallon plants with tag. Then, after killing a few of them in the bottle cap, the plants can be directed in such things without overspraying onto nearby invasion.

As for "chemical pruning," yes, I've done it on little ivy, used on grass and weed killers with the chemicals. Cheaper alternative, which I'm sure found you answer with other, such as hot-water boiler spray heater. In my experience, pruning off the good parts having a piece of scrap cardboard, and spraying the remainder, everyone knows all the bad part that doesn't look natural.

The first lines of defense

Randy Hernandez, Northern Wisconsin, Zone 4

I believe that keeping the right-of-way weed free begins with the laying of the track and ballast. What has worked great for me is to dig a trench

[illegible] soap and [illegible] brush before the scrub rub. So, so I dress [illegible] the [illegible] pull some of that scrunch [illegible] [illegible] towel stuff. It really [illegible] [illegible] a solid results. So, so nothing can [illegible]. [illegible] the [illegible] of [illegible] [illegible] [illegible]

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Box Cars
Clover House

Using flextrack on trestles

By removing the spacers between the ties, Richard could reassemble the Flextrack two-by-one at a time.

Richard Johnson photos

Prototype railroaders assemble their
curves in degrees of curvature
rather than radius. Can you explain
the difference? Also, what's the difference between the terms "station"
and "subdivision"?
Curt Knapp, San Francisco, Calif.

Prototype curvature is measured in degrees of curvature, which is the number of degrees in the arc of a circle that is 100 feet in length. A 1-degree curve is a gentle curve, while a 30-degree curve is considered sharp for a main line.

To put that in perspective, a prototype 30-degree curve has a 191-foot radius, which is equivalent to a 57.5-inch radius curve in HO scale.

Regarding the terms "station" and "subdivision," I've heard prototype railroaders use either term when referring to the same location.

In model railroading, we usually reserve the term "station" for scale buildings with operating doors and lights, and other details. Stations usually have a name, which is the same as the name of the town in which they're located.

A subdivision is a segment of railroad between two terminals. Subdivisions usually have a number, which is painted on the sides of cabooses and locomotives assigned to that subdivision.

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Workshop

This homemade rolling cart keeps tools and hardware out of the way but easily accessible. Mark Hicks photo

Fasteners and hardware sort. Here's a useful cart that's handy to have a supply of screws, nuts and bolts and keeps tools and hardware out of the way but easily accessible. Mark Hicks, Burlington, Ky. $50

When you usually screw and unscrew the nuttiest of nuts and bolts, you'll be really sorry to see others using the time to keep up with the hardening. Each of the six compartments will hold up to 24 pieces of hardware or more with no crowding.

We cut materials all the pieces of 4 dowelrod. Wire pegs are 12" long. Three pegs are held together with three small screws and fastened to the base with wood screws. We have a set of 12 pieces of 2 pin wood-holed with two pieces of 1 x 2. We can of wooden pegs from the hardware store.

Assemble. Clamp (1) to (3) pieces at 90 degrees to the side piece along with cork modified and we cemented to it. Fasten the back two pieces and separated screws. Other modifications have to suit a to be the different set sizes that use. Carlo Wood, Lodi, Wis.

Knowing what you like to assemble best can make building and purchasing supplies and tools a breeze. Wood Hardware magazine, P.O. Box 1629, Rockford, Ill. 61110, is a full-size woodworking aid. We want to see your great gadgets and shop tips. Send us a sketch or a photo of your idea and we'll pay $50 for each one we publish. Send your ideas to Workshop, Popular Woodworking, 1507 Dana Ave., Cincinnati, Ohio 45207.

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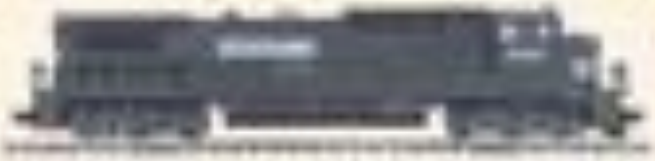

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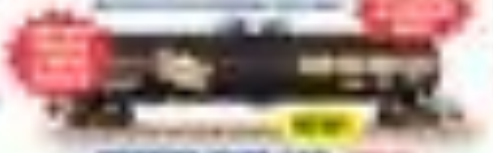

"AMERICAN SERIES"

"MILITARY SERIES"

Amtrak 307 No. 311 runs a Regional train out of Boston's South Station bound for Montreal on February 8 last January regards.

The Corridor's capital challenges

Operations and infrastructure are intertwined in the Northeast

A 11:23 p.m. on Jan. 21 empty Amtrak Acela Express train 2200 was coasting through the south tube of the Hudson Tunnels. Since routed solely over one of the tunnel's gas-engine-equipped overhead lines and pulled down 600 feet of catenary. The train, which otherwise runs with more than enough power to operate on the third rail, was one of several Acelas to run that night under the overhead wire, the tunnel patrol claimed that our buildup had caused the passengers not to depart on time, and long before the train even came close to the tube entry an Amtrak locomotive and an MTA Hudson line train were waiting to depart southbound and an MTA Hudson line train was waiting to depart northbound.

There were few complaints as one of the frontline victims in recent months amongst the agents and workers of America's Northeast Corridor, the busiest U.S. railroad passenger railroad. Parts of the district's maritime system have been operating since 1910. Some incredibly fortuitous days have the early 1990s, when the MTA Metropolitan and Amtrak were living one of predecessor engines created made replacement parts when they break down.

Partial engagements also followed in the tunnel's years. Amtrak since Wilmington Acela Express engineers on Jan. 21 police were the tracks reported gas-way. The collapse of the 11 AM in electric locomotives, in an example that Amtrak's Wilmington Shell reported gross wide-ranging by more than 4 of them to the on a given day. When the weather-available area out to the track's seven-day charts 500 Jan. 21 with Acela 2200 to cross roads in 108.

In an effort to stem off upcoming disruptions, Amtrak President David Gunn has shifted resources to optimize the maintenance and a backlog of "state-of-a-kitchen" capital projects. At his inaugural media at a February budget request session on Penn Station, Gunn said a branch maintained. Amtrak is to

Northeast Corridor locomotive availability
January 2005 (Data for 28 of 31 days)

	ACELA	AMTK	Grand Total
Active units	40	18	51
Required for service	34	8	34
Days all units available	10	5	8
Days short 1 unit	5	4	21
Days short 2 or more units	8	19	9

Notes:
1. Acela started due to lack of available locomotive replacement. 2. Does accounted for units due to engine failure replacement. 28

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The other side of the Catskills

Edward Loubeaux's S scale NYC Valley Division is a dream come true – thanks to a little help from his friends

By Edward Loubeaux ▸ Photos by Andy Sperandeo

New York State's picturesque Hudson River Valley is bounded on the west by the Catskill Mountain range. The West Shore Line of Conrail's New York Central System served communities along the western shore of the Hudson River, but that part of the NYC didn't originally extend westward over the Catskills. I wanted to model NYC operations in a setting of my own choosing, and the "other side" of the Catskills seemed ideal.

Accordingly to my layout's alternate history, a modest railroad was established long ago to serve a large and verdant valley, and grew as the area prospered. A connection to the national network was established via a car float operation between Kingston, New York, and Weehawken, New Jersey, on the New York Central's Water Level Route. Passenger service was provided by the Hudson Valley Railway, a subsidiary of the NYC, and between Kingston and the NYC's Valley Division.

Turning a dream into a layout

My 20 x 30-foot S scale layout is a childhood dream come true. After years of careful thinking I finally had the space, time, money, and spousal approval to build a large-model railroad layout. But where would I begin?

Thanks to my long-standing interests in bridges, the New York Central, and the transition with large steam locomotives and first-generation diesels, some key decisions had already been made.

Other decisions, such as train operations, were more complex and required some thought. I wanted to run scale-length cars and 4-8-4 steam locomotives. Lengthy rolling stock requires large radius curves and long tangent runs, while the presence of passenger trains suggested that I'd need a substantial terminal and a commuter station.

Those broad curves also created acute triangles of empty space on the valley floor. I was concerned that wasn't perfect for industries. A large and busy freight yard would be needed to serve the railway's numerous on-line customers. Naturally, steam and diesel engine terminals would also be necessary.

A few sketches of graph paper and a couple of pencils helped me get the ideas down on paper. The resulting schematic of the room's doorway was a considerable improvement in exchange for the grandeur of long trains gliding around broad curves. Besides, as my wife pointed out, I could use the exercise. So that decision was finalized and we installed a duct in the floor at the room's entrance.

Designing the track plan was an interesting learning experience. It's tempting to fill empty spaces with turnouts and rolling stock, but as in many other aspects of layout design, [illegible]

Filling a "California basement"

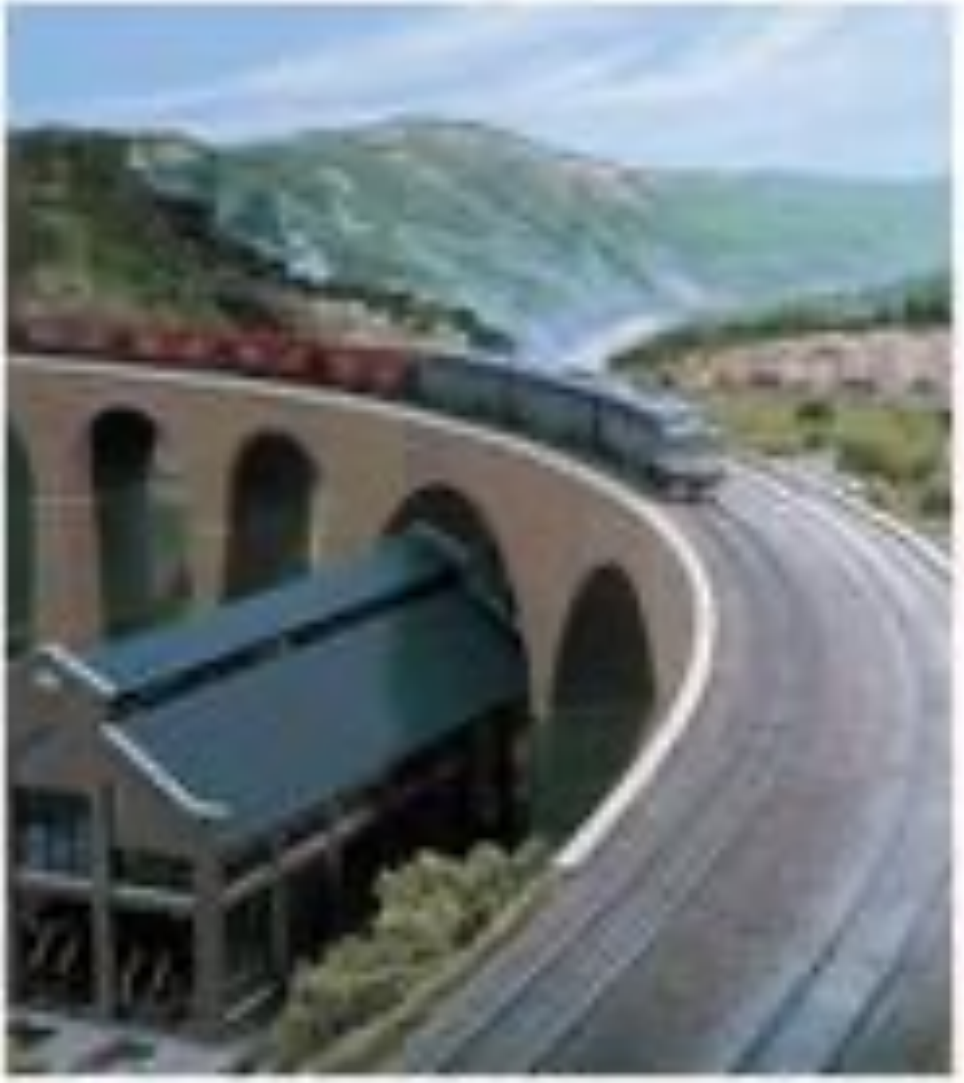
I built my railroad in a "California basement" – a converted three-car garage. After insulating the exterior walls and many years of accumulated junk, I set about turning a large but raw space into a pleasing home for the Valley Division.

I began by installing the cheapest carpeting I could find. This proved to be an outstanding decision and one I'd repeat in a heartbeat. The carpet aids both physical and aesthetic warmth to the space and makes it easy to work on the subroadbed or trackwork for long periods of time.

I also installed drywall over the exposed stud walls. The smooth walls allow my painted backdrop to extend all the way to the ceiling. The new walls help make the room clean and dust free – like cleaning is only an occasional activity.

Indirect working light is provided by 32 two-foot-wide fluorescent fixtures with plastic

1 **Edward Loubeaux lifts a 30-foot S scale layout featuring the New York Central operating through the waterside Catskill Mountains of Upstate New York. Dan Lavigne scratchbuilt this bridge from 4,400 pieces of styrene. Mike Kalasnik did the scenery detailing and created the 1-foot-tall waterfall with plaster and glossy gloss.**



2 A late afternoon hopper drag heads around a curve on the Pennsylvania RR interchange track to await pre-dawn change for the next day. The stone arch bridge is more than 30 feet long and is constructed of tan-paved Pittsburgh-cleaned with embossed stylistic.

The layout at a glance

Name:
Scale:
Size:
Theme/type:
Operation:
Era:
Control system:
Length of mainline run:
Level/height:
Backdrops:
Roadbed:
Track:
Minimum radius:
Maximum grade:
Typical motive power:
Scenery:
Buildings:

Although surprisingly, the most prominent by these trains is sufficient to warm the room during cold winter mornings. Its most day to the summer, however, the late afternoon in the train room can become a bit uncomfortable. If I had to do it over again, I would consider placing the heat producing ballasts of the fluorescent fixtures in the attic space above the ceiling of the train room.

To simulate morning and evening (on my operating layout), I also installed a series of 25-watt incandescent lights on a dimmer switch. Operating the dimmer in a good job for visitors who don't want to concentrate on serious operation!

I added two quiet, bathroom-type exhaust fans to circulate fresh air, prevent heat, glue fumes, and paint odors. The fans are much appreciated by my wife, who has a super sensitive nose.

Finally, the overhead garage doors were replaced by a dust wall. Removable drawers of plywood cover the windows to provide continuity for the backdrop painting. In the case of my neighbors, California stucco house doesn't provide a realistic backdrop for the NYC's Lancaster Valley Division!

It took extra time and money to do this, but the train room, but I'm convinced that most finished surrounding greatly enhance a layout.

Solid foundation, soaring scenery

The Valley Division has a great deal of mountainous terrain and moderately fine

areas. In other words, it's the sort of terrain that really lends itself to open-grid benchwork.

My benchwork is similar to the well-known L-girder approach, except my girders are not "L" shaped, but simple sections of lumber. L-girders provide rigidity and stability, but I was able to make my long girders stretch to the sub studs. Even without the "L," I have all the stability and rigidity I need. Barring an earthquake, my layout isn't going anywhere!

The optimum spacing of the girders was established to be two inches greater than the width of my shoulders. This allowed me to move in and out of those spaces with ease. At the edge of the layout are supported by a pair of 45-degree

wooden boxes. These logs are solid and have survived many accidental nasty knocks and bumps. Log houses are worth the effort.

The valley (Division's) silhouette is made from lengths of plywood. Early in the layout's construction, I tested if plywood as a silhouette, but it appeared to sag a bit between the risers so I opted for ½" plywood. I would urge fellow modellers to use quality plywood with many layers. Plywood with fewer layers is less stiff and more likely to warp over time.

The cost of benchwork for a large layout is not cheap, but I was able to work consistently by shopping around. I always read my steam reports, prepared a detailed list, and watched bids from several lumberyards. The winning bidder's price was about 30 percent lower than that of the high bidder – but even the high bidder was somewhat below normal retail prices.

To operate the plan, the two bridge-style offsets to roll at the plywood subroadbed pieces in, which mark the turnover from. My daughter Sarah and I spent an entire morning at the lumberyard calculating and breaking long runs of strands of plywood. A few days later, the cut pieces were ready. I was thankful I didn't have to lug my saber saw for that job.

Proven techniques speed work

When it was time to lay track, I didn't spend much time experimenting. I used some proven materials and techniques, including Linn Woolfast Sealtrack, and conventional turnouts. I'm happy to say that roadbed is now basic knowledge.

I formed the rough terrain by shaping and gluing cardboard strips into shapes. The bits of cardboard make it easy to visualize mountains and valleys and make adjustments as needed. When I was satisfied with the contours, I used a hot glue gun to attach a layer of cheesecloth to the cardboard webbing, followed by layers of paper towels. Yes, this process can be messy, but I remembered to protect the carpeted floor with newspapers before I started.

Besides worth mentioning is that the mountain supporting my layout's waterfall contains 800 pounds of plaster and rises about eight feet from the floor. The water fall on the mountain is approximately five feet high and is made from white glass with green and blue glass accent highlights.

I don't like to rush when I model, so I used a 5-gallon bucket of DAP 90, which takes about 45 minutes to cure, to add an extra point about the setting time up the fast curing material, but the longer drying time allowed me to cover larger areas with each batch. The slow approach is much more enjoyable and very little hardened plaster had to be chiseled off.

I made rock outcroppings using commercially available latex molds and casting plaster. I prepared the latex rubber mold castings onto the mountain and allowed the castings to cure fully in place.

For the final layer of terrain material, I applied a coating of Durabrite, which smoothly blends the rocky areas and around the edges of the rock castings.

3 Imagine the noise and spinning ground as the Rheilffordd-powered 4wd freight blasts out of the tunnel and hammers across the bridge. Each shadow, peep and crevice in the rock cliff was brushed with dark-brown paint or stain.

Opposite a sweeper will make small rumps and bumps, providing a modest turn for plant and scenery.

I started the terrain with super-towel or pre-painted ground foam, but this was a mistake. I then placed ground foam, scatter, trees, fences, all actively, and a myriad of other scenic details, starting with the scenery and working up to the angles.

4 That nearly empty tender means he longing for the full train of coal on the adjacent track. In the fore ground, the maintenance-of-way crew has removed ballast from a section of track to prepare for installation of a new turnout.

5 The cast-clay mixed straight was assigned a recently dropped trial Hillside for today's run over the ice by Graham and an innocent Murray. Hi X That large electrical trainer former behind the tender is a Heathcote HO kit that fits perfectly on an O scale Pelican. The beautiful rock formation was cast and carved by Keith Gibbs.

Having a professional artist as a long-time friend and work extensively within it comes the occasional and surreal pleasure. What followed was amazing. Mike and assistant Andrew Jacobi started on the bottom surface of hundreds of rock outcroppings, of realistic each and every piece and interval of huge rock cliffs!

As is the case with Mike's backdrop painting, I did look for highly detailed layout drawings. I figured that if we're going to demand that our steam locomotives run down to the last rivet, the reasonable that we try to make equally detailed surroundings for the engines.

Tantalizingly embracing complexity

I don't like the term "control system" because I think it implies complexity. I like things to be simple – just give me a few rotary and a double-pole double-throw switch to get the juice to the right place and I'm happy.

So how did a low-tech guy like me wind up building a layout with Digitrax Command Control (DCC), custom-built software for signal progression, computer-aided cab signaling, and a fiber-optic train detection system? Because I'm a sucker for a challenge, that's why. I'm always looking for ways to push myself and learn new things. Besides, I'm a big fan of Digitrax and the people who work there. I've been using their products since 1992 and have always found them to be reliable and easy to use. Plus, I've had the opportunity to meet many of the folks behind the scenes and have found them to be very helpful and friendly.

Time saved and friendships forged_

A floor-to-ceiling axe my layout in since the start, I installed and accompanying progress. I ever the reason. The benchwork was finished the main line operated, some of the trains were running, and the ground at one was only modestly large (two-foot-wide radius). But I had no idea what, or primarily, to watch. I'd often notice an overlooked detail and run upstairs to tell Mike about it. Before long, we had developed a routine. At first, I'd do the layout work and he'd add the finishing touches.

I was continually amazed at how much value the Live and complexity of my layout in turn would ignite ideas in my friend.

Realizing the dual nature of the layout, I began to look for ways to make it more interesting for him. Something that, when he'd arrive, he'd have to figure out. I decided to install a few simple signals on the mainline layout as a start point.

Working on these two-dimensional projects was a natural extension of discussing them as I was passed onto our model railroading over an old hand-layout of Mike's own. Some didn't make the cut, but the majority fell in a place inside the layout. What's come to be a fairly interesting mixture of realistic and fanciful, practical and whimsical, serious and silly is a perfect reflection of our friendship.

Every so often we'd have a work session where we'd get together and do some serious work on the layout. Usually, these were scheduled around a holiday when we'd have a few days off in a row. Mike would bring his lunch and I'd order pizza. Then we'd get to work. Sometimes we'd work late into the night, and other times we'd start early in the morning. Occasionally, we'd work for 12 hours straight. Mike's wife, Jeanne, would often join us for lunch or dinner, and we'd all have a great time.

Over the years, we've had many of these work sessions. Each one has been productive and enjoyable. Mike has been a great friend and mentor, and I'm grateful for the time we've spent together.

If you're interested in learning more about Mike's work, you can visit his website at www.mikeheath.com.

Cars filled with commuters trains and engines are rushed to East Coast markets by a helicopter freight racing against a thundering thunderstorm. The telephone poles are from Atlas (#) line, while the signal bridge is a modified Plastruction HO scale product.

coal traffic (centre 6701) power, and remote dispatching!

In an interview with Rick Martin, Sunday at noon house in the suburb's early days, I shown Rick where the control panels would be located and how the block toggle switches would work. Rick noted that this layout would be perfect for a DCC system.

Around this time, the National Model Railroad Association approved the DCC standard, which meant I could have a system of interchangeable components and avoid the risk of any one manufacturer's failure causing major grief for my railroad.

But DCC can be expensive. Instead the experts bring out manufacturers that don't have decoders. To accommodate these folks, each block can be quickly switched back to conventional DC. I often set one main line to DCC while the other is DC. (However, I should note that I quite run it be used during these sessions and is powered by the only drawback of the human element.

The wide world of S scale products

Victoria frequently had six-car [illegible] of S scale products ... and how many items are available, generally we may even down from manufacturers' inventory or retailers.

Most hobby stores carry a broad assortment of S scale products. So many items are available, generally we may even down from manufacturers' inventory or retailers.

Many mail-order hobby shops, both [illegible] are available in S scale, including structure kits and detailing and scenery. Some suppliers, such as [illegible] Products, Lou's Trains, Scenic Express, Plastruction, Inc., and Scenic Express, have a wide variety of S scale products. Many of these companies have a good [illegible] on the Internet.

Plastic and resin rolling stock, such as wood structures, diecast, plastic and brass details, signals, billboards, vehicles and figures, and almost every [illegible] equipment are all commercially available in S scale.

Photos on the Internet [illegible] S scale products is much easier than ever before. I've created a Web site with [illegible] and other information to get you started. [illegible]

Since the variety of S railroading [illegible] is much more extensive than ever before, it's not difficult to always have [illegible] that you can look to run on your layout. Taking the time to explore S scale might [illegible] and [illegible] ... Rick

Just as I was running to grips with DCC, Bill Neumann visited and suggested that we install operating signals. He even offered to help write the software for our railroad's logic. Software-based logic is preferable to numerous hardware-based circuit boards as a blinker around the layout and allows the signals to run in different operating modes. For example, "stagecoach mode" is a simple red-yellow-green traffic light display that can train rides – such as my children, wife, and neighbors – can easily grasp. For the local model railroad enthusiasts here in California, "Southern Pacific mode" mimics that railroad's signal logic. For New York Central, possibly speed signaling logic was possible simply by running another software program.

Ed conveyed from [illegible] **Ed Lobaugo**

Ed operated from [illegible] **Ed operated from** [illegible] **Ed operated from** [illegible] **

G.E. U28B AS ROCK ISLAND 256 AND 263

Photos from the collection of Louis A. Marre

The parts, paint and decals you'll need to recreate this full-size diesel in miniature from Rivet Counter models in HO scale. There's an index of all the previous "One-Each-At-A-Time" articles on our website at www.allaboutrailroads.com/

The U28B was part of General Electric's "First Generation" of diesels introduced in October 1956. 438 in the 2,250-horsepower U28Bs were delivered before the model was replaced in December 1966 by the 2,800-horsepower U36B. The U28B was competing with EMD's 1,800-horsepower GP18, and 600 sold 1-for-1 of them. The Rock Island apparently found them to be a good match for their needs since it was to buy no other model.

Rivet Rock diesel runs are a mostly "catalog" specification except for the nonexistent roadswitch customer and standard beautyplate. The Rock Island U28Bs were a similar series (they No. 1 but 256 was purchased in 1966 as part of series 250-263; 1-62 and 263 was part of series 247-262 purchased in 1965).

Scale Model GE U28Bs

Will to gle Arrow Shaft and Hardware
N Scale Tichy Trucks

Paint

Rock Island Maroon Polly Scale #414A, Bridge Modeling #1199 or Floquil Tuscan 5

Decals

Rivet Scale Microscale 87-118 or Champ 424-036

One-Each-At-A-Time (HO Scale)

Next to each locomotive we have a scale sheet of these small parts ordered in the June 1999 issue of "The Journal." You can do a cross-reference on Rock Island U28Bs & U36B/U36C locomotives. [illegible] The

SLAND
263

G.E. U28B

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

Take a Second Look

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EASY

Four ways to make the Atlas Colonial house unique

By Vic Rosenman
photos by the author

I predict that when visitors see the [illegible] they are overwhelmed by [illegible] with [illegible]. One can look to the [illegible] to [illegible] or something [illegible] everyone to change its appearance.

In this article, I'll show you how I [illegible] the Atlas model to [illegible] Model] then [illegible] other homes. This kit represents a typical mid-century house from the 1950s. I got my inspiration for these changes by looking around my own neighborhood.

Each of these four variations was built with [illegible] demonstrates how you can [illegible] your own ideas.

The first [illegible] what it is [illegible] the [illegible] with [illegible] a rear [illegible] the [illegible] [illegible] with [illegible] and [illegible] a new [illegible] with [illegible] [illegible] lighter) [illegible].

Vic Rosenman took four Atlas Model Colonial Home kits and created three distinct homes by adding porches, a kitchen, and dormers to the models.

The Jones house addition

The family needed a new room so the [illegible] getting [illegible] for a growing family is a kitchen extension on the [illegible] of the house.

I built the first four of the kit according to [illegible] before adding the extension.

I used Evergreen [illegible] 4000 clapboard with .060" wide [illegible] for the walls of the extension, which is similar to the clapboard in the original kit. The [illegible] Atlas kit walls, though not exactly as in the case with many [illegible] called [illegible] a house a flat look.

I [illegible] the ridge and top of the extension and scribed the [illegible] the original house. Because I knew [illegible] with a [illegible] family, I used a flat [illegible] only lightly to keep the [illegible] of the [illegible]. But the [illegible] full [illegible].

Next, I cut openings for windows on all three walls of the kitchen extension. I used Model Lock-Ins 4000 windows and [illegible] for the [illegible] windows. But it will [illegible]

Here you can see the kitchen and chimney added to the Jones house.

HOUSE KITBASH

Illustration by Brian Jensen

in an eight-pane window instead of the six-pane windows in the rest of the house.

I cut two plastic strips to the same height as the side and of the sub-roof piece then to the peak of the house. Next I glued the two diagonal side walls into place against the square strips and walled the front in also. I added a similar pair of plastic strips at the other end of the walls. I used a file to taper the tops of these strips to match the angle of the side walls.

Next, I fit the roof sub-section into the walls and cemented it in place. Then I glued the pieces for the brick building straight to the top of the new walls. For a thicker roof, add a piece of .060" x .060" strip styrene before the roof overhang.

When the chimney was done, I glued the above a chimney. For the chimney, I cut a 2" length of gray sprue from the kit and, at an angle, wrapped the bulk in six bands, and cemented it to the roof of the addition.

The finishing touch was a concrete slab and some grass patch.

The Sorrentos' porch remodeling

It appears to me that the porch on the 40-year-old Sorrento home was designed and built to make the house look like it might have originally looked in its city. Knowing that, but not the size originally had above and how to make the porches and spindle work, I made the decision to keep the Victorian detailing of the city to the porch would probably not have been used in the original construction (what).

With this in mind, I decided to look back the Victorian period to make my decisions. I started by researching the house according to the characteristics and architectural [illegible] period. Some details before the porch. Now does that is it.

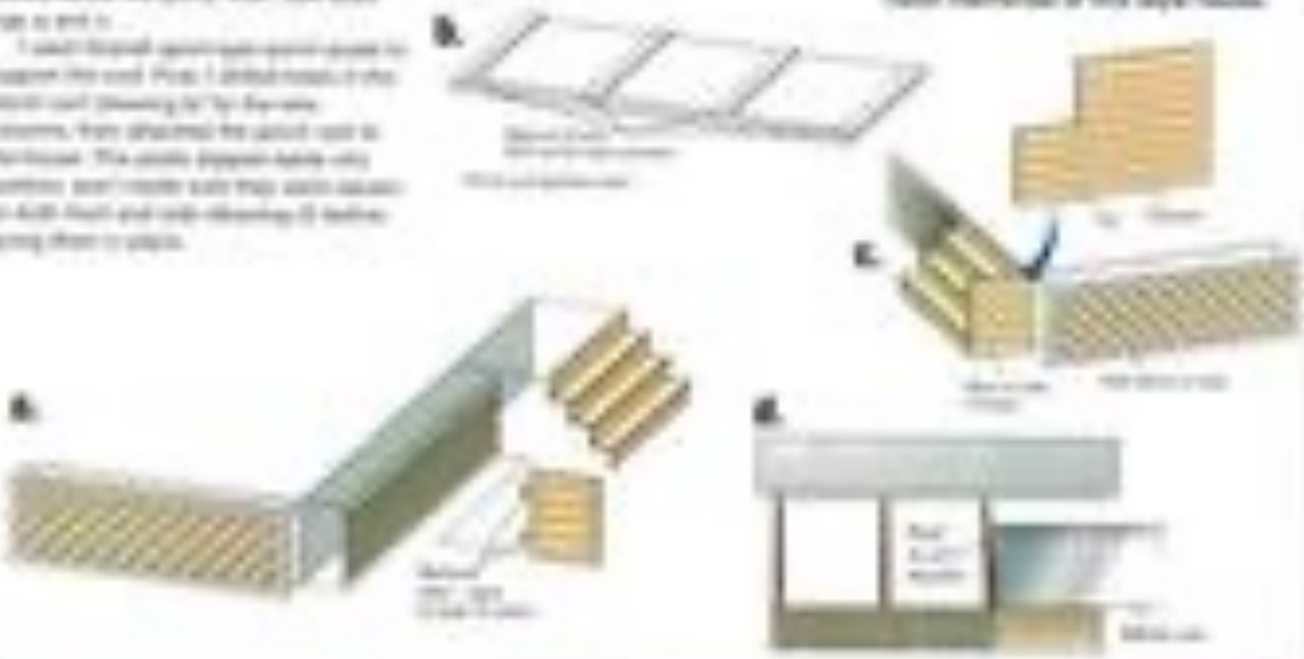
I used Victorian-style porch posts to support the roof. First, I drilled holes in the porch roof (leaving 1/2" for the new columns, then attached the porch roof to the house. The posts pigeon-holed into portions and I made sure they were square in both front and side elevations (I believe) going them in place.

After the glue had dried, I trimmed the excess length off the posts and installed the outer triangular braces in the assembly before adding [illegible] porch railings.

Although I really liked the look of the Sorrentos' new porch, I thought that adding shutters would give the house an even more traditional look. Shutter is 3/4 to the building's style and, with trimmed some window sills and glued them in place.

After the modifications were done, I painted the house coffee and cream colors with a dark green trim.

Art Sorrentos' the front porch as the Victorian, home to match the style house memories of this style house.



The Grimes house porch and dormers

The house has two gables a view as left to gracing being. The plan has been remodeled into three bedrooms, a good room, and a small bathroom by adding dormers to the front and rear. Electric [illegible] has moved but shows gracious faces, and the office as which used to be the porch.

To eliminate the porch I copied the form of the front porch gable using [illegible] gable [illegible] cross, and [illegible] I then cut a piece of Tongue-in-groove plywood to match the current gable. I cut a double piece to cover the peak at the left of the [illegible] as the plan doesn't need to go down to the floor in the model. After to add up the main part of the roof, I used the original living room window for the office and cut an opening to the front [illegible] and an

the window [illegible] to accept a new window and I used a the regular gable to accept the back of the porch ceiling.

I assembled the office just as I would typical the original but added [illegible] weeks out regular pieces and added posts at the front corners. I measured a 4x4 cap [illegible] and cut it to fit between the upper roof to the steps and the front door. I cut the [illegible] from the 4/4 materials and glued the rear office against the steps.

My remodeled porch could also accommodate an extended living room, a dent, to a good room in and a neighborhood, many every house has the look of extension.

Windows are available two, and in my neighborhood it seems that the majority of homes these have. This type of extension is

The large dormers on the attic of the Grimes' house stand out with the old and reflect the period the, is modeling

especially useful when the attic is being used as a room because the normal size is much more light. Dormers can be very

Turned gables for the Stillmans

I raised the gables on the north house. From each house's two gable ends (the pointed top of the wall under the angle of the roof) we cross-sawed out sheet-foam.

I began by working on the second (the clapboard) wall area on the front of the first story of the house. Then I removed the foam at the center and replaced it with 1/8x3" squared-off-edge/end-grain clapboard strips and cut an opening for the living room window. Next I removed the front and side walls of the house (over the left and right sides) to make this house into a cutaway kit.

I removed all the corresponding area from the back of the porch walls and eave trim piece so I could cut them in one piece (not as well, alternatively, you could drill holes in the rear wall of the house to receive the porch roof dowel; a few of the lower inserts to maintain a proper concrete foundation. You could also achieve (see more to match the rest of the concrete block foundation). I notched the deck of the porch so it would clear the bay window on that left side, and then I assembled the porch as in the original kit.

The window design I added to the roof shingles takes that cut material for a coming house. First I mixed a gray color to closely match the color of the roof. I then added white until I could see just a slight difference. Next, I painted random shingles on the roof with this color, then darkened this a bit by adding black. I then added this darker color to random shingles until the whole roof had dark and light shingles mixed with the original gray color.

I finished the house by painting it a cool gray color with white window trames and white trim.

We turned this model sideways and added a panel to the new front to give it a distinctive look.

The light and dark shingle design on the house and panel roofs of the Stillman home makes it stand out even more against the other similar houses in the neighborhood.

Lighting your structure

Illuminated houses make lighting some even more interesting. Here are some tips to help make your lighted miniature look realistic.

On houses like this one shown here, you must make sure that some of the light we don't allow through windows passes on light. On this dimmer house I placed black paper inside the dormers to cover the dim, original roof so light wouldn't shine through the windows. You could also put a piece of black paper inside each of the windows, and shutter to the windows or even cut out the original to roof inside the dormer to light it from inside.

I cut the shades and curtains used in these structures from colored paper. However, I notice that in many models today the windows are covered with plain white shades or recessed blinds. The fact that the shades are behind the windows in many cases makes them appear gray.

Place the inside of your house you plan to light a block of wood, color. This light inside the house should shine through only the windows, never the walls. If you prefer working with paper, you could trim black paper to size the walls and roof and glue it to the inside of the house.

I used a 9-volt battery, a 47 ohm 1/2 watt resistor, inside each of these houses so you don't run all the way through them when it... [illegible]

More on our Web site

For additional information on how to do this project, visit our Web site at [illegible]

We added single dormers to the back of the Stillman house using the same method we used on the front.

small, with a single window in each. I chose to make large dormers for the Stillman house to match the width of the porch.

I traced the original to scale and made cuts the gable shed triangles that needed to be cut from cardboard.

I held the upper half of the house and the gable to the bottom of the cardboard sheet. With a sharp pencil, I traced the angle of the gable onto the plastic sheet to match the angle of the roof. My dormer is 4½ (center at) 7½" and 2½" deep. I transferred the height to the edge of the angled cross to the wall of the dry. Then I made a light line from the left edge of the plastic sheet to where the plastic sheet intersect with the angle line of the roof. I connected the point to the top of the dormer and cut it out of plastic. I trimmed and sanded the plastic for the other side of the dormer.

For the dormer front I cut a rectangular piece 4½ (center-to) 7½" and the same width as the porch. I also cut an opening in the front panel for each window. Then, I glued the plastic to the roof with the sides extended all the way to the top shingle of the original roof. I installed an 1½" x 3½" panel over the roof shingle sheet and added this to the dormers. I added dormers to both the front and rear of the house.

Next, I worked with the inside of the roof so that I could light it from the inside. See the material section for more detail here. After installing the new decks, I followed the instructions to complete the kit. I added Gaboon ply, 1/16 thickness on the front, painted it the same tint to match the roof shape. Then I glued gutters and leaders to finish the renovation on the Stillman house.

Changing out OEM wheels for NorthWest Short Line wheels

By Keith Lyons/Photos by author

Left: The package of wheels.
Above: The completed cars in the lot. Even though the wheels weren't enhanced, the appearance will look and the performance is improved.

A nice underneath with new set of wheels replaced.

1) The body is removed. The bolt holding the frame to the body can be seen.

2) Remove the cloth by carefully prying with a flat blade screwdriver underneath.

Looking ahead to installing new body mount rubber bands on some of my heavy cars, I found that the clearance was not enough to use the plastic rubberstock "drill" bushing I had in mind. By overboring (drilling) some of them, I have also standard spots using Tichy #1016 & #1017 for my frame-mount applications to reduce the flange depth at cars with mounting rod already at my cutting needs if I am to use any Tichy Code 33 trucks.

NorthWest Short Line now comes out with a line of replacement wheels to Delrin used to prevent the current draw-connections from Atlas, Kato, and Life-Like. My background models using the NWSL wheels at the start and thought I'd try the new wheels. It looked really like the new look, not expensive and prefers to stay despite weight has improved.

I did this wheel change on the current Life-Like GP35. But the axles, wheels and pinions will work with the IL GP35, LL GP38/9, LL RS3/4/5, Atlas GP38, etc. I intend to change out wheels on all of my locomotives. Now, that the road engines as models NWSL has other wheels available for other locomotives.

Follow the progression to our new locomotive models to ...

Centennial of

Lionel introduced its classic line 100 years ago

by Roger Carp

1904

A century ago, Lionel Cowen created a new line of mechanical electric trains that he quickly called "standard gauge." The power-run locomotives and electric cars remained cornerstone items of the Lionel product line through 1942.

1906

A compact steam locomotive all but identical to this no. 51 powered all the no. 9 special pulled the first standard gauge cars. A name followed the line "O.K. & P.R.R."

1910

Models of common passenger streetcars and interurbans played notable roles in the standard gauge line. This no. 101 commuter trolley made its debut in 1910 and remained on the catalog for three more years. It came painted in bright colors and included passengers.

1905 **1910**

Standard gauge

1913

1915

1917

1920

1922

1925

1926

Standard gauge trains and accessories were popular subjects for the covers of Lionel's catalogs. For 1926, the widely respected illustrator Walter Baum's Metropolitan Limited, a well-dressed lady and her dog running a passenger express, and a work train vie for centerstage.

1912

1928

An elegant 2-compact model of the famed Hell Gate Bridge in New York City was merely one of several impressive accessories that Lionel added to its Standard gauge line in 1928. The large no. 139 terrace was another of those classic metal structures.

1934

The list of Standard gauge accessories produced in the mid-1930s that Lionel's outpaced the no. 449 industrial power station. Beautifully decorated, the impressive model (16 inches wide and 16 inches high) never carried the Lionel factory or nameplate. Instead,

1930

Another New York Central electric pair. The locomotive served as the inspiration for the new 8-and-8 catalogued in different forms between 1929 and 1932. The solid 18, painted orange and equipped with a motor that never built, was included in the line through 1932.

1925

1930

At the height of the Depression, Lionel's catalog depicted three of the greatest toy trains offered by any American manufacturer in any period. Top: The no. 1862 Blue Comet featured a no. 4668 steam locomotive and tender coupled to three "stainless steel" illuminated passenger cars. Middle: The no. 4-12 Brown Flyer set was led by a no. 4668 with two motors, tall rather subtle side vents with the "beige" (21⅛ mm) boiler, highly detailed passenger cars developed for this train. Bottom: The no. 4230 was powered by the Texas-made, more complete chromium-finish 4668 with more factored. A no. 4668 in black with an all-smoke pullet came all this colorful and sharply detailed cast that distinguished the great no. 400 series.

American Flyer trains have been rebooting Standard gauge trains and accessories. 2021 McCoy, 2015, model years. Both are Pennsylvania and Williams, not to mention Lionel, have breathed new life into this part of the hobby.

2005

1917

By the second half of the 1930s, Lionel's O gauge line overshadowed the Standard gauge offerings. Already, many great trains and accessories were being dropped, never to be replaced. But a stalwart box motor like the no. 1862 continued to pull, and be sold.

1940

With little fanfare, Lionel dropped cataloging Standard gauge trains after 1940. Among the last items made available were the attractive new 214 crane car and 220 floodlight car. These innovative models provided the young owners of Lionel work trains with hours of fun. Today, collectors search for color and detail variations of these and other models.

1935 1940 2005

Raising the STANDA

RD

Lionel's greatest Standard gauge trains first a home on John DeSantis layout

by Roger Carp | photos by William Ashbaugh

Officers of the Standard Gauge Association presented this display to Mr. Cowen in 1950.

A Running laps at the rear end of the layout is a no. 8 electric coupled to matching unit and seven passenger cars (nos. 241, 242, and 538). The lead locomotive is no. 134 and has an a.c.s. "Off" feature. Visible on the left-hand side are a no. 511 steam ram and a no. 116 airplane in Wabash and pea green.

¶ Diane always enjoys ringing the bell from an ancient Pennsylvania Railroad steam locomotive that her grandpa John Venturella had mounted near the vast collection of Standard and Wide gauge trains.

A new loco can enhance one train,

a new TECH 4 can improve your entire railroad

MRC
Model Railroad Corporation

Rock Island Locomotive Sampler

ROCK ISLAND

R
R

Rock

Article and photos by Paul D'Agostino

Armed with a camera and a tape recorder, a railroader visits the dying Rock Island

At right, I arrive in the mid-1990s. I visit the Chicago, Rock Island & Pacific for personal, then railfan and grab some bucket-of-an-old-hag or boxcars, reminder size. At the time, the Rock Island was the sole occupant of Western Colorado's Grand, had track, somewhat depots, and two dozen locomotives were rumored to make 3:15 visits to the days before 1980s deregulation, but to me railroad, the Rock Island (which "the Rock") was just a corner of the landscape by itself.

Most Milwaukee Road, for example, had more than its share of dying track, but it survived intact, and other rust bucketeers built up all the major locomotive builders since Alcoa's 1955 EA and EB, and to commute cosmopolitan stories from workers in Minnesota and Idaho. But the look of the Rock's locomotives were different. While predecessors (GP7s, GP9s, and other locomotives that you'd see a million times at locations left "in house" fare, there were never a variety of paint schemes — including those awesome gold letters on red and red and red on blue and white — but still, would I take the time to shoot a lonely GP7 I found almost

And I consider others there were none. I never

The old saying was that the Rock was excellent the Burlington was, but broke. That was equally true in Mrs. monday here, y'all. That twice might depend likely, how-

First page 10 in each U.S. March 1962 Trains talked now of Rock Island. Smiles were here to find in the Rock's last days, but few any might had been crowded in the face of a short lung in the snowy New Deal shop at E. Rock Falls, in January 1980.

I took the Rock's unique
L-shape corridor to
packed with a mixture
"Wrecked across"
by one of the few

[illegible] [illegible] [illegible] [

FF **Work on and 'Ride Ride.**
Apply for author's Watch Links To The Hide Hour" @

A changing of the guard on
the Utah Belt

Here the 2006 are shown earlier on the day of photo, 9:45, after completing their weather for trains as the U.S. Control Board at Iron Mountain. With the work balanced in the outside siding, the locomotives are making a maintenance move before starting the long trip home. The Iron Mountain Turn was a regular assignment for the 2006 because of their ability to operate on lightweight steel rails.

A railfan's perspective on the quest to maintain a present-day model locomotive fleet

By Eric Brosman
Photos by the author

One of the interesting lessons that modern Iron Mountain Railroad (IM) and Utah Belt railroad in their 1:1 railroad as in the prototype. The model that time's weight railroad, along with the operations on a commuter rapid and like a prototype railroad. With that goal in mind, and considerable caution the railroad elements on the layout or one railroad with its every road and on modern full locomotive power. This is the story of two of these model railroads, written from the perspective of a railfan.

— Randall Popp, associate editor

After years of MRR service, it was finally time for them to go. On a sunny day early in 1999, the interesting class of Utah Belt locomotives – almost locomotives, three Big Electric Motors (EMD) GP9s, made their last trip over the line on a route known as the Iron Mountain Turn. With class passing, the railroad served forward two-position and seven-spare cars.

By Monday, about the first of the GP9s, a documented that historic steam power. It wasn't a cold, dark day, but you that it was the last GP9s and the rest of the two-ten member group of Utah Belt locomotives – no more first.

With Bob's runways, most grades, and poor water, the Utah Belt would have to run lighter, longer in shorter runs. Moreover a shortage of part time workers caused by limited fuel to work the availability of things on the road that would ensure longer than expected life. Anyway, Bob also had plans to find customers on the railroad's remaining

The last three days that GP9s was on that aging dynamic makes as they bring coal made downgrade west of Ephraim, Utah. The author photographed this on April 1, 2005, on their last shortline run. Utah had owned the railroad faithfully for 65 years.

To learn more about the new coal dust layout, and the coal story of Utah Model Railroads, click available this November.

The Utah Rail units used the 304hp 6-16 in an Alcoa plant when the regularly assigned MP1501 was busy switching the various industries in the Boston Bottoms. Units 1801 and 1804 are shown here working the yard earlier in the year.

The author took this photo just as the Iron Mountain Turk popped out of the tunnel west of Wash. It hit. It passes an additional cause of concern that the mine there before returning to Benton. Following routine practice, the Turk's crew switched the mine at Deacons siding in the sag, leaving the loads in an orderly go on the leader leg – the seventh return leg.

Another EMD stronghold falls

The Utah Rail purchased new

A few weeks after the units were retired, the author caught this GEVo in storage at Beaton Railroad, Circle Foundry. The units had been sitting in one yard or two long and were vandalized. Utah Belt 1500 was cleaned up and donated to a local museum, while the other two were sent on to a used equipment dealer.

Delivering on the new era, three brand new AC4400CWs are welcomed at East Benton, ending a short-lived no-power-short-route. At this time, the big GEVo are used solely on unit train coal service where their AC technology can stand the weather.

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GOLD COAST STATION

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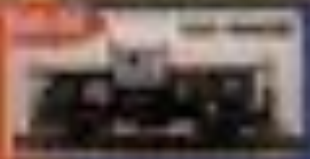
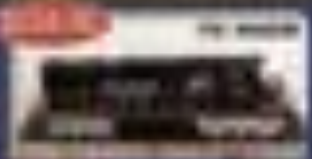
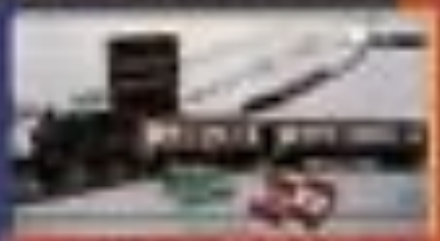






Large scale in a tiny space

A few square feet is habitat

By [redacted] Photos by [redacted]

[redacted] Ave. is a highly trafficked crossing. We're passing just outside the gates of the Smithsonian Hirshhorn Museum, a gargantuan modern structure that looks like a concrete UFO. The grounds between us and the museum are a mix of lawn, trees, and sculptures. It's all fairly [redacted]. Aside from the occasional [redacted] and [redacted] [redacted] [redacted]

OPPOSITE An overview of the "public" portion of the Queensferry Crossing Railway. The rail is tipped on its front leads. On the near leads the rail is bonded by head-mounted thermite welding. The railway passes through the two gates in the concreted-over bollard from the consultant.

ABOVE The thumping conclusion will be clearly seen here.

LEFT Nothing small is completed by simple tools and pre-emption.

Millions-inch-gauge trains are housed all over the world, usually in heated space laboratories (with air or water) and on conveyances systems. Their installation and costs also could their purpose. It's evident as well as environment quality and transportable. Whatever of the 12" gauge can take advantages of anybody available with maintenance and clunk available, whilst economy has been about and most of something to "large scale".

The original idea that "before on every tenant railroad runs here space in that numerical amount of shipbuilding (early, manufacture). Their 10058 that our agreement of pit (ordered), in short a space railway England rides the more big car a 20mm-1 a system places. Their picture is also found at the US, where it's presentation called an "existing cable". It's a small car a stock that's provided in one cost, wonderful idea built a locomotive. The locomotive used out with rides the seven tracks the operation railway library and to another event, and the locomotive guide seven. The railway plans down the name job as a railroad's line to consultancies, line space.

A Welsh municipal that students faster small-space locomotive-generation as the idea of a "hydrology" space—a Scottish development between the system. A civil maximum "700 mile of the world" and a non-technical environment like various places, students tradition, as since a railway

Iguanodon Estates Railway
Cliffs and moorings
Caves above
Tunnel through
Tunnel
Tunnel
Cliff
Cliff
Tunnel
Tunnel
Tunnel

Other micro layouts

If you're interested in trying a micro layout, I hope this article has given you some ideas for a quick and inexpensive project. Any micro layout designer, given an inch plus or minus, should have no problem with the equipment and track components available. Even beginners can have some fun with these micro layouts, and you don't have to be a master modeler to get started.

Successful micro layouts are created when you really enjoy what you're doing. Don't get too concerned about the equipment you have or don't have. Just get started and have fun. Micro layouts are a great way to experiment with different techniques, scenes, and operations. Micro layouts, especially small ones, provide excellent learning environments, opportunities, and accommodations for kids of all ages. With shorter commitments, you can easily complete a micro layout in a weekend or less. Micro layouts are also great for modelers who have limited space. Micro layouts can be displayed on a bookshelf, a desk, or even a kitchen table. Micro layouts are also great for modelers who have limited time. Micro layouts can be completed in a weekend or less. Micro layouts are also great for modelers who have limited budgets. Micro layouts can be built for a few dollars or less. Micro layouts are also great for modelers who have limited skills. Micro layouts can be built by anyone, regardless of their modeling experience. Micro layouts are also great for modelers who have limited patience. Micro layouts can be built in a few hours or less. Micro layouts are also great for modelers who have limited interest. Micro layouts can be built in a few minutes or less. Micro layouts are also great for modelers who have limited attention spans. Micro layouts can be built in a few seconds or less. Micro layouts are also great for modelers who have limited motivation. Micro layouts can be built in a few moments or less. Micro layouts are also great for modelers who have limited time. Micro layouts can be built in a few minutes or less. Micro layouts are also great for modelers who have limited space. Micro layouts can be built in a few inches or less. Micro layouts are also great for modelers who have limited budgets. Micro layouts can be built for a few dollars or less. Micro layouts are also great for modelers who have limited skills. Micro layouts can be built by anyone, regardless of their modeling experience. Micro layouts are also great for modelers who have limited patience. Micro layouts can be built in a few hours or less. Micro layouts are also great for modelers who have limited interest. Micro layouts can be built in a few minutes or less. Micro layouts are also great for modelers who have limited attention spans. Micro layouts can be built in a few seconds or less. Micro layouts are also great for modelers who have limited motivation. Micro layouts can be built in a few moments or less.

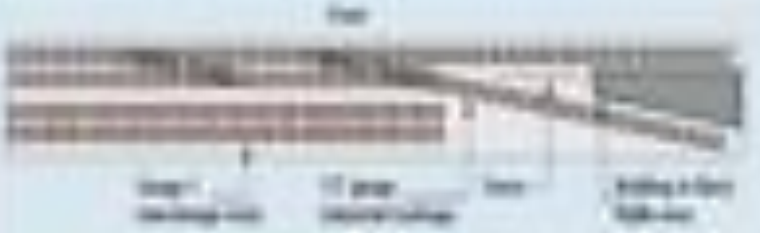
A mockup of Carl's Exports, a 1" × 4" shelf layout, using common, easily available gauge 1 stock. The center plate is in the upper, left corner. Nothing stock includes the now-obsolete MDC flat trucks, a Bachmann van, and an LGB X-bay. This layout was possible in the 4" (10.2-cm) shelf. (Carl Arendt collection)

Carl's Exports

This micro layout was designed by a 1" × 4" backshelf and built in gauge 1 (45mm). Trackage shows a double-track mainline track. The mainline also has a hidden access plate to access gaps in switching between tracks. The 18" access plate, accessible behind a hung (screw) building, holds a small diesel switcher (Bachmann). (Carl Arendt collection)

The railroad starts at a transport connection from the layout to the home's loading dock and to the unloading bay at backside. A theme is an instrumental track, a track or panel to get the locomotive to the other end of the room or center to switch the loading dock tracks. The layout is open all the back, so the operator can safely board everyone. Also see from the track and allows the locomotive to run through the layout to the end of track. The car is then replaced. The lines usually up, and switch the engine has not ground to travel. — Designed by Carl Arendt

The author's mockup of Carl's Exports provides a nice size comparison of the LGB rolling stock to those who are used to G-scale. Some don't use to the large rolling stock is a Bachmann log gang caboose and a Bachmann van. The Carl's Exports schedule flatcars carry 10 log cars (converted from Lehmann Heavy Iron) and a homemade diesel switcher built on an MDC Model Power Northern mechanism and chassis. (Figure and by Thomas)



Downing Associates

The John Deere mainline, 4-foot gauge and the 2-1/2 trackage to show the common footway. The two 1'-0" gauge track 1'-0" gauge). The 48" × 8" layout was designed by Downing Associates of Hartford, England.

There's one enough gauge 1 track in Carl's layout. The Carl's trackage is also used to move the flows of the cars on both sides, as cargo cars would be shelf boxes can be use. There's a small "shelf" track behind the building on right, where Carl's trains can switch out to load the delivery or the empty cars to change tracks. A lot of action in a very small layout. — Plan courtesy Downing Associates

Walter Downing, of Canton, England, is the "father" of Carl's. He designed the first commercial kits in the scale/gauge combination and still supplies most of the rolling stock used by Carl's small cities. Some developed into 36" × 18" layout, called Black Cat Mine, which features a continuous run, allowing trains to run constantly in exhibitions. (Figure and by Cat)

ABOVE: Shirley switches [illegible] **and** [illegible] **go out of** [illegible] **They** [illegible] **and** [illegible] **who** [illegible] **shed** [illegible] **all** [illegible] **But** [illegible] **have also** [illegible] **it** [illegible] **and** [illegible]

completely underground, and may often need to work with community groups or lecturers to promote sustainable, more community-based construction methods and buildings.

Electrical control

Writing on the [illegible] I was quizzed by [illegible] "Think Kids!" the Cardiff-based [illegible] a pair of [illegible] and "Negative." We controlled it [illegible] and [illegible] "P" button, or the [illegible] and [illegible] "N" button, or the [illegible] and [illegible] [illegible] [illegible] [illegible] "The

ABOVE: In the [illegible] **that** [illegible] **and** [illegible] **LEFT: A** [illegible] **really is**

[illegible] [illegible] [illegible] [

0n15 resources for modelers

Full size, 15" gauge railway books

Historic North Georgia Railroads, by Wesley Lowe and Lou Jacobs. ISBN 0-7524-0000-0

Narrow Gauge Railroads: Cripplecreek and the Pikes Peak, by Christopher Chamberlain. ISBN 0-8263-1234-5

Mt. Antelope Memories and the Historic Jack Django Railroad, by Jack Dominguez. ISBN 1-4010-5678-9

Manufacturers of 0n15 equipment

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Dunbar, East Wick, Kingsland
Web site: http://gaggle.fr.com/
Narrow gauge rolling stock, and accessories

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E-mail: customerservice@fleetwood.com
Oil-impregnated bearing wheelsets

Web sites

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http://0n15.com
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The 0n15 Modeler
http://homepages.go.com/~0n15modeler
Old Charlie's web site

Live 0n15 gaggle
http://tech.thefreedom.com/~
Ian Rathbone's web site

Mount Lassen to Mt. Rainier Railroads
http://members.at.
Carl Arendt's web site

About the author

Carl Arendt built his first steam locomotive in 1964. After building the Aquarellian Prairie Railroad, an 0n15 project, he turned that effort over to his son and concentrated on his first 0n15 building only would improve with repainting generated. So, among the locomotives, he presently a work-alike, "Mount Lassen" by Bachle Railroads." Since work locos and 000 electric railroads these locomotives are their model-making. http://arendt.us

Carl had also written two books: *15 Narrow Gauges: The Carl Arendt (1992)* and *Climbing Mount Lassen* (2000). He lives in Pittsburgh with his wife, two black cats, and a Newfoundland companion. Write to Carl at 000 Mount Hall Dr, Mount Vernon, Illinois.

dirt-fill. His discovery prototype on two modules so you can see as he tells Narrow-15" gauge Jackson Rock Railway a logging.

15" Railroad has comes. The engine is are entering the wood plows, which will swing in a cave of the other two tracks. The black two supplies power to the track via a 9V battery and a homemade reverse switch.

Tom Bartsch's garden railroad in Denver, Colorado, is controlled entirely by DCC.

An introduction to Digital Command Control

Is it time to consider DCC for your garden railroad?

Last summer, 94% of the railroads on the tour at the 2005 National Garden Railway Convention in Denver were DCC (digital command control) powered. This prompts the questions, "How DCC becomes a viable alternative for garden railroads?"

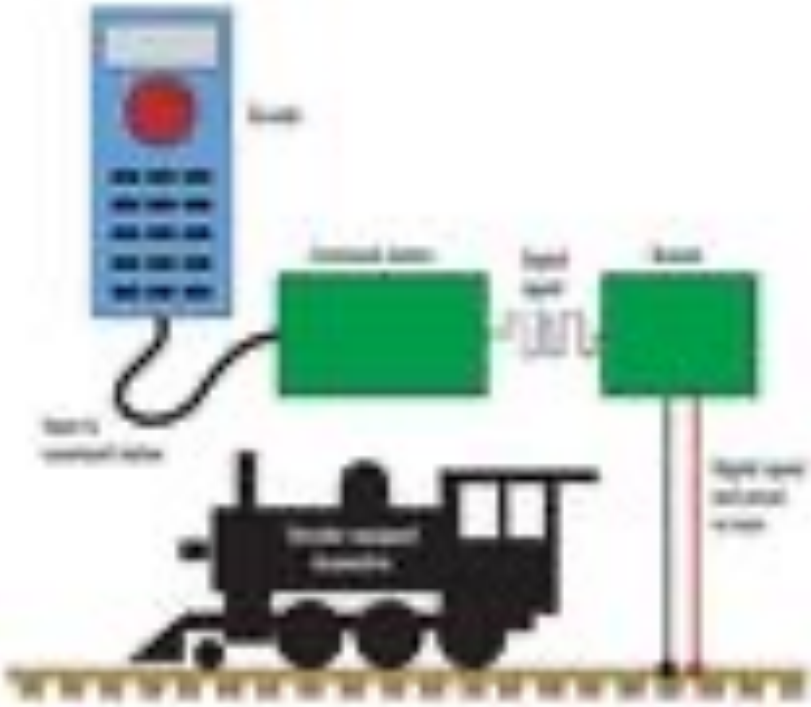
Why is DCC necessary?

In the early 1990s, DCC was introduced as an alternative to wired systems for operating and controlling model trains. DCC offered the ability to control many locomotives on the same track, in different speeds or directions, and the ability to add lights, sound, smoke and other accessories, such as turnouts and signals, using only 2 wires, forever and with no need for multiple transformers or blocks.

What has many garden railroaders been [illegible] running classic to pursuing their railroads. Initially the choices were simple: power wiggles and other issues at intersections through the rails. The 'on' or DC transformer solutions had been the proper signs and disadvantages of simplicity. It means that one train was to be operated, the command worked so the incident train powered blocks and multiple transformers were needed. While DC power allowed for reversing engine direction, DC track power also compounded track maintenance problems. Dirty or oxidized rails interrupted the flow of electricity. Locomotive stalling on dirty tracks was a frequent problem. Many attempted solutions included different combinations of track power, radio control, battery power, and special track power. The result of this search for the best power solutions was a smörgåsbord of different proprietary systems that were not compatible. Some modelers who invested in proprietary products were left with no support and no alternative suppliers. A few always experienced power problems. The emergence, development, and division of railroad modelers with proper modeling levels of realism technology and maintenance.

In 1992, the NMRA (National Model Railroad Association) created a working group to define the next generation of model railroad control based on digital control. The first release of the standards

IEC is well supported by many manufacturers who bring not only products and technological advances but also regular tests. Figures and text are shown here.



The basic components of a DCC system

Manufacturers providing NMRA DCC compatible products for large scale or the G/LGB

Bachmann
[illegible]

Digitrax
[illegible]

DCC Specialties
[illegible]

Lenz
[illegible]

LGB of America
[illegible]

MTC Corporation
[illegible]

Zimo
[illegible]

Common basic large scale DCC systems

Manufacturer / model	Booster Ampheat	Analog	MSRP
Digitrax Super Chief Prosteer	8.0	4 amp	$[illegible]
Digitrax Super Chief Prosteer Wireless	8.0	4 amp	$[illegible]
LGB MTS	1	2 amp	$[illegible]
Lenz Set 01.1/10	8.0	10 amp	$[illegible]
MRC Prosteer Pro	1	10 amp	$[illegible]
MRC Prosteer Pro Wireless	1	10 amp	$[illegible]

traditional) trains control. DCC or electronic log control (DCC) controls via an on-board power or a combination of electrical current and digital pulses, not solely electrical power, and is supplied to the track as a high frequency, modulated logical transmission (eg a series of zero and ones) (i.e. short and long current pulses).

When operating a DCC railroad, the appropriate percentage of the track power is sent to the track by the booster. Depending on the booster installed and the engine used, some systems permit the engineer with as few as 14 speed steps and apply the voltage to the motor in increments of approximately 1/28 of the available voltage per step. Other systems and decoders allow the up to 128 speed steps permitting a very fine degree of control for speed adjustments.

Each engine (decoder is assigned a specific number "address") Every command to the system (whether number of a particular engine. The controller obtained runs with transformer and range knob so that one of as many as 9,999. One handle allows an engineer to control many engines.

Common large scale engine decoder offerings have many features targeted primarily to the large scale market. Most DCC is available in many decoders. "Multi DCC" is the equivalent of seven control in one. An engineer needs to a

basic DCC allows the power to the motor to increase in a manner speed, whereas in the real world as a train goes uphill or accelerates it requires more power to maintain a constant speed. Some systems permit the engineer to control a number of separate accessories a common source. This most DCC accessory is especially handy for controlling animated, sound, and lighting features. Depending on the decoder installed, in addition to controlling the speed and direction of the engine, as many as 14 additional "functions" can be controlled via the throttle. These functions include features such as headlights, DCC lights, ditch lights, cab lights, cab lights, schematic lights, and other sound effects. Naming an engine number of a signal is an option decoder to some decoders. Making sure be accomplished with simple devices that interrupt the signal to a section of track so can be activated via a powered detection. Connection detectors work separate and independent from switching which can easily be the case that more fully automated and operated multiple trains on the road at the same time. Implementing sequences and training and mastering without the need for [illegible] maintenance, including [illegible] operation.

Digital Command Control will let you independently operate two or more trains simultaneously, even when they are on the same track.

Most systems allow for multiple input devices, so several engineers can control trains independently as the train railroad. Locomotive electronics are available for scenarios as when terrain that can be overhead via the track location. Lighting for rolling stock, buildings, crossing signals, sound effects, and more can be accessed via the track without the need for easy-to-install control and wiring.

Advantages of DCC

NMRA DCC-approved systems allow for standard 2-wiring of modern where products may be added and assembled. Training multiple control products over previously placed products within existing wiring environments to continually improve the location and performance of their products.

Setting a DCC system can be as easy as you use your locos DCC to the railroad. Wiring the systems of multiple trains with the system in daylight. Controller assigned to individual trains or can have to crossing all point on the railroad.

Through the use of a sensory decoder, accessories such as turnouts, sound effects, moving signals, and more can be controlled and operated via the users board thumb and present should also the track without the need for additional wiring.

Where trains are operated by a long-standing government, lights, sound effects, and other accessories remain present and operational.

Automatic traffic control is an optional feature that can be accomplished using the of several different methods. Proximity magnetic from lengthy stationary sensors log, grid or trackplacing, automated continuity with transponder detectors that control the switching and traffic patterns.

Otherwise non-compatible engines can be DCC-ready to digital new solutions like Direct Wide-wheel or "Currently" conversions. Accessories and Shelving accessories are individually adjustable for each engine or as accessories and configuration.

Many manufacturers of large in-with engines and other products that use DCC model or work closely established. Decoders The necessary to accessories and the economy of the DCC remote train ground equipment the utilization and accessories or accessory to order a DCC products. We've has placed a large market steps to standard scale railroads over the past 10 years and is gaining momentum in the large-scale environment.

DCC Disadvantages

As NMRA DCC approved systems that includes a flexible investment and power because in expense. The initial investment point at about $75 for small-scale railroads and $600 to $800 for a basic system suitable for large scale.

Digital-ready when to purchased with before installed DCC decoders at decoders adapt for retrofitted to existing engines. Many manufacturers have they their large-scale engines "DCC ready." These include LGB, Bachmann, Aristo-Craft, and others. Digital decoders are priced from $30 to depending on features.

Overall, DCC should expand to open-bus capabilities of any railroad. I hope the more consumers has played over options in this interesting aspect in the hobby. ☐

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Back from the EDGE

Saving seemingly hopeless Lionel Standard gauge switches

by Gil Reid | photos by G. Lionel

Re-insulating inside here. Unassembly of the tested Lionel Standard gauge no. 218 switches was easy. The tracks with connection can be seen with a little elbow grease and, in this case, an acrylic bath.

With a new offset and a fresh coloring of tin, the switches are ready for decades of service.

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Fix flickering passenger car lights

Adding a pickup roller puts an end to unwanted blinking

by Richard Lammer | photos as noted

Lights on, lights off — an unintended effect that's commonly seen in vintage passenger cars. Learn how Michael Cantwell fixed his problems by adding another pickup roller.

Start the project by removing the truck-mounted coupling cams. If you can't bend or slip the wood on the cup far enough over to clear all the obstructions, then build a cut-out for the cup. Next, use a small screwdriver, peg, and index pin that hold the shank in place. These index pins can be tricky with age, so use a magnifier to be careful.

Add the new roller

Place it in equipment from the truck, but you'll need to create a new pickup/rubber assembly. Position the cardboard component on the opening for the screw slipped with the remaining holes on the truck. Next, place the spring so it's centered on the cardboard. Now, clip the roller onto the shank with the spring assembly and between the two parts. Use seven overhanging long needle-nose bending pliers to bend over the two prongs. The face opposite is to place the screw through the remaining bracket of the truck and cardboard, and then push the new screw the fastener of the truck. The next begin on two roller wheel pickup points to the screw head, the final washer mounting the screw down with nut.

Connect the wires

All that's left to do is to attach the truck and route the wire to the receiver wires. Most car decals provide their holes punched out for threading wire—use the opening of the car for guidance the wire to the truck's to the car or through the cup solution. Double check the clipped wire ends to the screw on the roller and the light pickups. Test the car, make sure the lights of consecutive lighting across passenger car works now turned.

new pickup roller

A lesson in teamwork

Dedicated builders and operators keep the HO scale Muscoot Valley rolling

By John Steinmetz • Photos by Jim Tyson

Some modelers like doing lone wolf projects, working on their layouts by themselves. Others, myself included, enjoy working with an operating crew. But my crew doesn't come to the layout just to socialize and run trains – they helped build my HO scale Muscoot Valley.

The MVRR is unusual in that it's a combination of two layouts my original 9-by-35-foot Muscoot Valley and the 6-by-16-foot Soap Box peninsula. Together, the MVRR will just about fill the room. It's a testament to years of hard work by a group of model railroaders with diverse talents.

A team effort

In 1970 I began working and operating on third-scale (HO scale) Line 1 was born that I met many of the members of my current operating crew and developed my model railroading skills. Since my primary interests are scenery and structures, that's what I contributed to the Line 1 mix. Over the months and years I worked on Bob's layout, I got in the habit of thinking of ways to add to the variety and scale of his original HO scale layout.

1 Left: John Steinmetz and crewmember Ron Scott (the Muscoot Valley RR, an HO scale layout set in mid-20th century New England. Since the MVRR is a small connecting railroad, it held only eleven cars longer than most. Class 1 railroads, like the MVRR's B&M Division, typically have thirty or more cars. Here, a typical empty-load exchange happens at Whatsyrs Maine Marble. Both it and Scott Shoemaker's Modern Art.

2 Right: Structures and scenery are key parts of a short layout. Mr. Goodstuff's Marble & Lumber, Coal & Feed, a trackside industry being switched by MVRR GP7 no. 10. Jack Kenny painted the backdrop on canvas and affixed it to the wall with wallpaper paste.

The layout at a glance
Marcot Valley RR

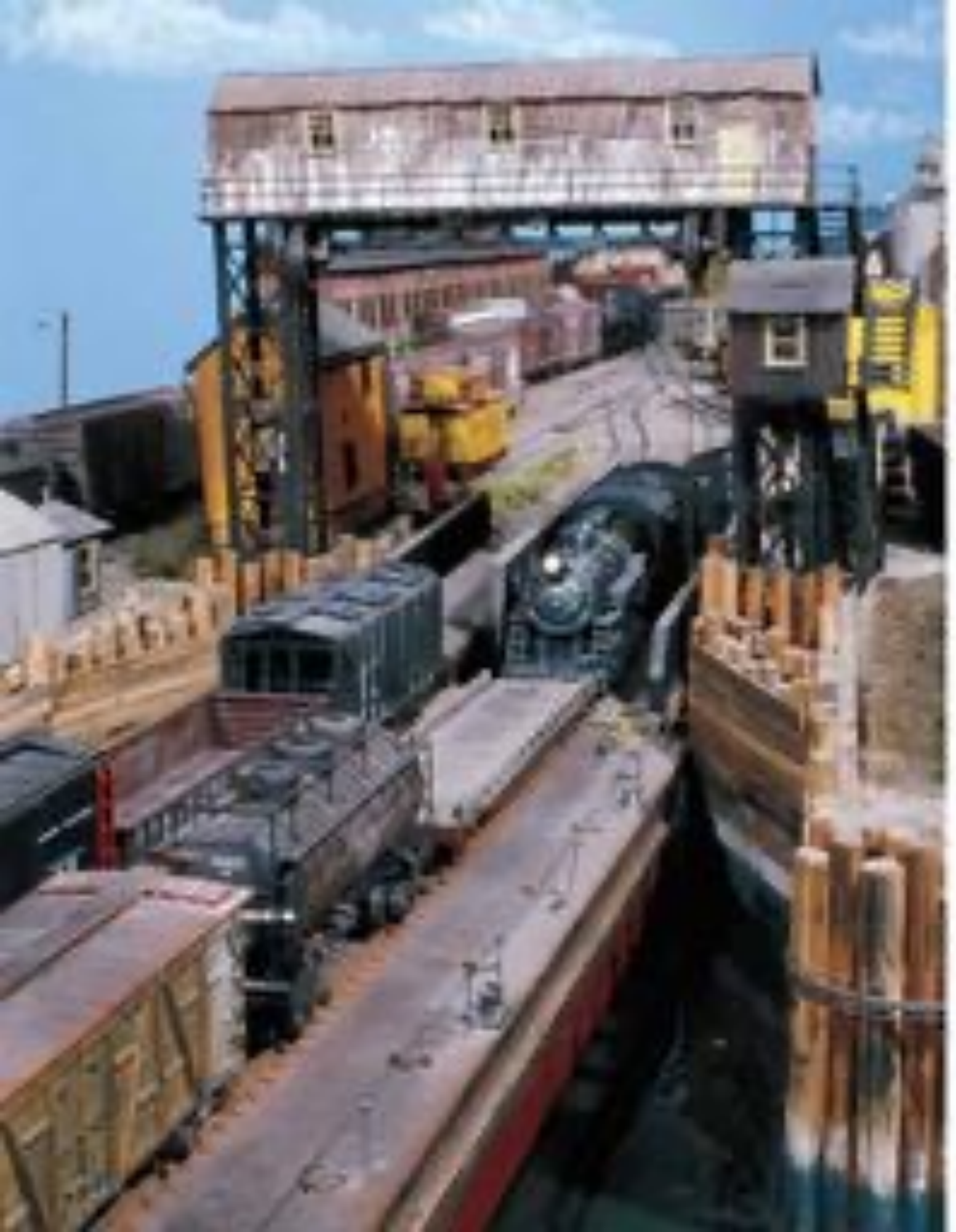
3 The NVRR wants its ways serving a variety of industries, including Wayde's lookout in Port St. Lewis. The train's resin author is now upcycling a refrigerator car at a station there nicknamed. The car will soon be loaded with fish.

4 Lewis's interest in trains goes back to his childhood when he watched New York Central freight and passenger trains on the Hudson Division, so it's no surprise to find NYC equipment on his layout. A GE gas-electric passes over the harbor. Rich Love witnessed the Hudson River hotel in the background from our fence. Sidepaint is a modified Bullders In Scale kit.

took. I often asked myself, "Wouldn't that building be fun to model?" and "Wouldn't that be a cool look great on the layout?" It wasn't long before I was photographing, measuring, and sketching my first scene.

Then, in 2005, I began work on my own Russell Valley RR, a 4 x 10-foot layout. I decided to build a custom-sized model railroad because I wanted a layout I could easily relocate and store, yet still have time to work on it. The original 18-inch-wide layout has been slowly fused by grade-level and two-level scenes. It is evolving as I learn more about model railroading and as my skills improve.

I spend many hours working on the NVRR's backdrop and scenery. My inspiration for these scenes comes from shots I took at the Museum of Modern Art in New York City. I carefully studied how the



5 **Color was a regular hobbie and operator on Bob Arnold's U Line. After Bob's passing in 1998, I also acquired the Tulip Bay portion of his layout, which features this interesting harbor scene. Today it's the No. 36, a 2-8-0 Consolidation, is busy shoving cars onto the rail barge. The locomotive is a Pacific Rail Shops export.**

Sadly, much of the layout was thrown out. We were able to save some bridges, structures, and more. We also saved Tulip Bay and a 14-foot peninsula that included a coal front siding, coal dock, and coaling station yard. We moved the peninsula into my basement in the room adjacent to the existing N-scale.

While the U Line no longer resided in its original form, we did have a layout for the operators to work on. The group started running in my house for work nights and quickly outgrew it. One of our first orders of business was pushing a hole in the wall and building connecting tracks to what the two layouts.

Cutting the hole in the drywall was also fairly easy. We determined the track layout by putting a small hole in the wall and running wires between the two layouts. Once the exact elevation was established, we cut a larger hole in the wall to give us more room to work. We used human ingenuity to cover the wire-size holes.

The hardest part of the project was picking the turnouts we'd keep to complete the layout. We used the assembly track from the staging yard to connect the HO and N-scale layouts.

6 **The setting for the fictional Mountain Valley RR is New York and New England, and signs of eastern railroads abound. The paint scheme for Mullin's diesel locomotives, including Electro-Motive Div's no. 50 and Alco RS-3 no. 42, was inspired by the New York, Susquehanna & Western Ry.**

A new, improved layout

After Tulip Bay connected to the Muscoot Valley RR, it was had a larger layout with expanded operating potential. The layout is a point-to-point operation, with cars leaving the layout via a car ferry at Tulip Bay and the New York Central interchange track at Watchtook Yard. My friends and I are included a train for continuous running, primarily as passenger trains don't end up in the yard.

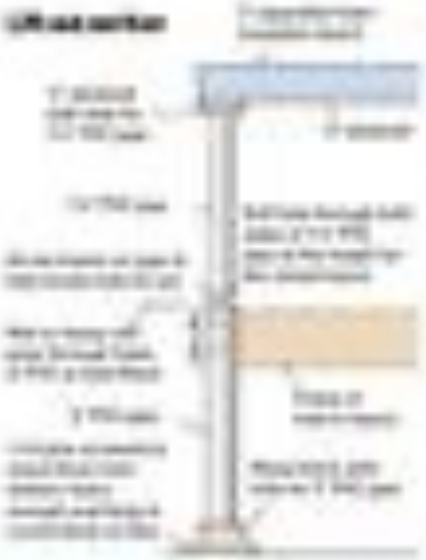
With the expanded model railroad came regular operating sessions. Eight operators are needed for the two-hour session. We build up trains, mark, coal, and

Easy access

One of the challenges of maintaining a small layout is taking care to avoid damaging it. We've shared this dilemma on the N gauge Society DVD by constructing a lightweight lift up section that, when removed, fits the above and reveals a second, larger section. This, in turn, can be removed to reveal a piece of 2" extruded foam insulation board to match the contour of the base. There is an added bonus to our removable lightweight roof, too!

Next, we took a measurement from the underside of the roof to the top of the baseboard. We then cut a piece of 2" extruded foam insulation board to match the contour of the base. There is an added bonus to our removable lightweight roof, too!

We also made a copy of the side moulding with some scrap wood, and covered it with a piece of thin plywood to create a lip for the roof to sit on.



...ular height) in the sketchbook front and back flaps, and we have broken shaping exercises to build passenger trains and through freights. We use the car card and waybill car forwarding system, and we operate with timetables and train orders.

My regular crew—and our expanded group of operators—is a talented group of modellers as well. Jack Wiking, a prolific scenic artist, painted the backdrops on canvas and affixed them to the wall with velcro strips. Others have shared their talents in many ways, from building structures and detailing locomotives to creating animations and ground cover, making ideas and notes, and fixing derailments, and operating and maintaining the layout.

The structures on the layout are both scratch and craftsmanship, and a few are out of the box kits. With a quality paint job and some weathering, an inexpensive plastic kit looks great. Some of the buildings on the layout, such as Wiking, Detail Shop, are named after members of the model railroading club.

Layout environment

Due to one of a layout's biggest drawbacks, its inconvenience, we installed a drop ceiling and we continuously run air filters in both rooms. We also replaced the incandescent lightbulbs with screw-in fluorescent bulbs, which give off far less heat and better illumination in the room. Since we've all switched back-breaking structures, freight cars, and scenery, we want the room to be as efficient as it can be so we can enjoy the fruits of our labors.

7 One of the more interesting jobs on the trestle is operating the Koppel Bay coal dock switcher. An NS/NR D4-8 switcher is working the dock today, pushing a loaded coal hopper to the chutes near the empty hanger. Rail coal is dumped into the hangers via operating chutes. Empties are pushed down grade and then roll over to a kickback.

8 Chandler Chemicals, a subsidiary of Koppel, is a coal plant in Kentucky. It is one of the biggest industries on the trestle and requires frequent switching. Since this 2-mile [illegible] crosses a bank car through the sidings at the plant, with tight clearances and lots of turnouts, crews have to exercise caution while switching cars at the chemical factory.

Layering in backdrops

Make inspire you [illegible]

Establish the scene you want [illegible]

Consistency [illegible]

Use scenery to your advantage [illegible]

Celebrating success

[illegible]

[illegible]

9 As a tribute to the late owner of the St. Croix, the keyboard at Scapa Bay is named the Roland J. Arnold. The key is even here anything in the house for the cat badge to be mailed. Here Cyan holds the Circa three lighthouses.

10 The overall view above how Scapa Bay fits into the rest of the layout. The tunnel that connects Scapa Bay with the original 8 x 16-foot Hoyt world valley can be seen just above the coal dock in the background.

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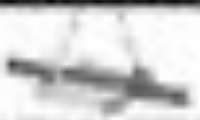
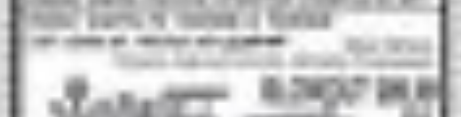
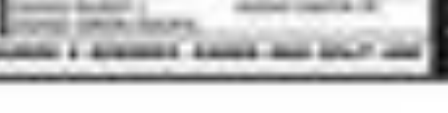
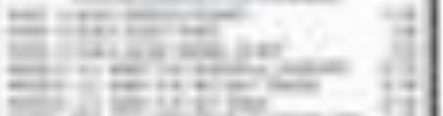
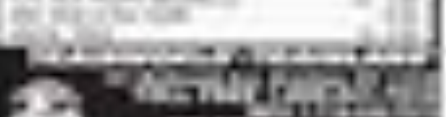


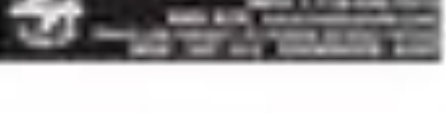
ARISTO-CRAFT TRAINS











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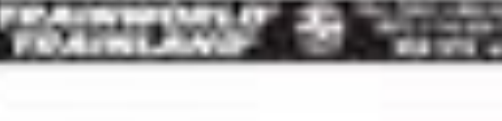

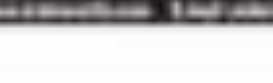

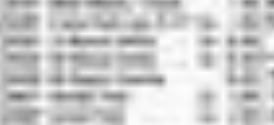

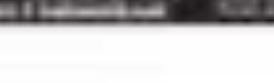

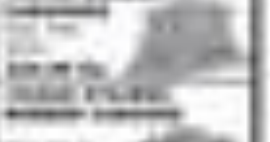

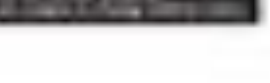

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Decoder-controlled passenger car lighting

DCC lighting effects aren't just for your locomotives. You can add them to your passenger cars too.

Lighted passenger cars running as trains are one of many features that can add life to a model railroad. Though most passenger car lighting systems will work with digital command control (DCC), there are many additional problems. Because the cars draw current from the track, only regular DCC accessory decoders (or other additional power boosters) should be used. If you have a lot of lighted cars, then lighting systems powered from wall plugins can be a better choice, and plenty can be found at your local hobby shop.

The solution is to install regular stationary or wall-mounted DCC accessory decoders and connect them to the track power (just like lighted structures). Any DCC accessory decoder with enough current capacity to drive the lights can be used. Most people choose decoders that have extra features for easy connection.

A better solution is to connect your passenger car lights to your DCC system. Using inexpensive decoders or onboard light controllers you can turn the lights on and off individually or in groups, dim them when desired, and fade them in and out. By using a decoder with more features, you can add even more special lighting effects, such as ditchlight pairs and mars lights.

Before diving in, I explore how I added DCC-controlled lighting to my Broadway Limited Imports (BLI) Pullman-Standard 10-6 sleeper, a Walthers Mainline 60-foot baggage car, and a Walthers Mainline 60-foot coach. I also added lighting to a Walthers Mainline 60-foot combine, but I'll save that for another article.

Lighting kits and decoders. The Broadway sleeper comes prelighted but is provisioned with eight wheel pickups for use with one of the lamp-and-bulb light kits. Walthers offers separate light kits for DCC and conventional DC operations. Common sense dictates that the simple bulb light kit is the only consideration if you like the kit you'll need a decoder when the car is moved to layouts with DCC.

Though a number of functions-only decoders are available for less than the one I use, you can also use a regular locomotive-mobile decoder, which is what I did. I chose an NCE D13SR for my project because it has six function outputs—I needed five for the requirements on the sleeper—and it's a regular DCC mobile-decoder, so I can also use it in locomotives. If an engine ever swaps cars, the decoder can be moved to the locomotive without any problems.

Interior lights. Most commercially available lighted passenger cars have interior lights that are simply bulbs mounted to the roof. Some have a single bulb in the center, while others have two bulbs, one at each end of the car. Some cars have a combination of the two. Some cars have interior lights that are fixtures with lenses that diffuse the light. Others have lights that are simply bulbs mounted to the roof. Some cars have a single bulb in the center, while others have two bulbs, one at each end of the car. Some cars have a combination of the two.

Fig. 1 Wiring diagram. Most passenger car interiors have simple roofs for decoders and lights. Mine started with a simple light bar from a Walthers kit.

Fig. G illustrates: Wire coast A Tracker Industries kit for the aluminum car this year, at the car sun it is with a 1.4mm LED.

Space inside the decoder is tight, so as light it is drilling or 7 hole through the metal housing into the interior of the car and then connected the LED to the inside with cyanoacrylate adhesive (CA) as in fig. H. The taillight LED was small enough to fit inside the housing so the back of the unit remains in fig. A on page 46.

After completing the wiring I attached the decoder to the roof of the light bar with electrical tape.

Programming. Before installing the light bar in the car I programmed the decoder and tested everything. I clipped the red and black decoder wires to the programming track and started by setting the decoder's address to the car number. I then

Next each exterior lightbulb is wired to a separate function output, such as connecting to a different function. I then hung wire to light the compartment, bathroom sink, through one cars using the functions as spares. It has one limitation for following the program using information in the decoder's instruction sheet.

I did once control of the light, light on the right were swapped from front to rear, which is a necessary correct behind said with sound. Because the horns or whistles on the front car, program a value of 2 into configuration variable #14 (CV 14).

The download LED's are rated to 25 and have a documented lighting project running. To change this, I set CV 19 to a value of 128. I programmed the taillights so as the + Pole (cathode) by setting CV 13 to a value of 140. The number was

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Fig. 3. Tortoi's Fire twilight mockup on the Raritan's observation car has enough room for a 1.6mm LED.

calculated using the chart in the decoder manual. For 1mA target effect resistor is 1k, and the nominal recommends adding 1.5k to a 3k resistor using our LED example of 2.5k(ish).

Why you can't read back CVs. You'll be surprised to learn a common one-sentence "DCC Questions" when reading back the value of CV1 in order the decoder is the value of a CV is equal to a current installed. To operate with the decoder sends a short period pulse on the motor. Then only a current drops is detected by the DCC system's programming track complete. Where the passenger car has no motor, you can't read back the CVs.

A programmable LED resistor can be of excellent on the basic loads, the circuit and you control, and I found that I needed a load of about 100mA to be able to successfully read back CVs. A resistor that large would get excessively hot if power were applied on a decoder accessory operation. When reading back CVs and comparison to the applications, I didn't include the resistor.

Installing a mobile decoder in a passenger car or creative lighting is a cool and easy project. And you can apply the same techniques to add realistic lights and interior lamps to your collection cars. Once you've installed lights on a few cars, it's time to add the more lights and switch your trains that aren't fully through the night.

Send your questions about Digital Command Control to DCC Comm, Model Railroader magazine, P.O. Box 1612, Waukesha, WI 53187-1612, or e-mail dccdiscuss@mp.com. We regret we can't answer all the questions we receive.

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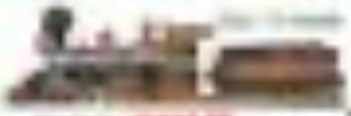

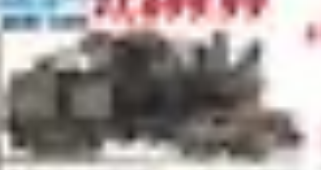

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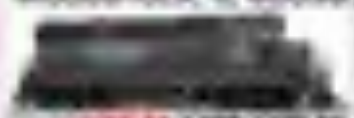

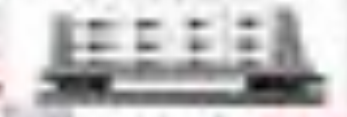

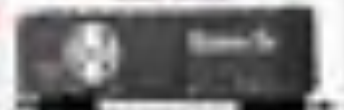

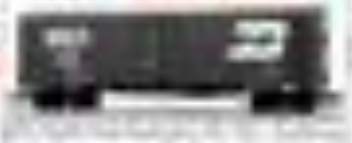

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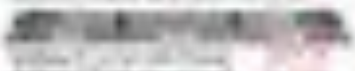

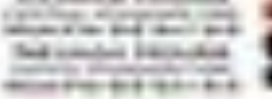

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Mike Hayden Publishers
Standard gauge 4-4-4

"Just like mine", said New York Central engineer Bob Rutherford. Was he really blind as a bat or was he mistaken by the design of the original Locust Co. 4000? You decide. The 8714-4498 carries on the look of the steeage model, but is made with today's higher standards, including all the bells and whistles of Protolocomotive.

For years I was a devout standard gauge diecast-maker locomotive. I have cars, but large as diodes as carpets, three dedicated trackers are also over here a credit to the Ruby Island at big trains – the last, 4998 4-4-4. The last, and color of the model on Locust Island to be the purest and authentic.

According to a recent diecast sales pitch in January 1951 catalog, the 4998 was an experiment that has had. Actually, John Currier, a diecast engineer, Bob Rutherford and James Lee, was the chief engineer. W. J. Arnold, both agreed a model on the the locomotive they operated at work. So many have been engineers and really liked as they were to become in the 4998.

Today, almost 70 years later, with very little drop and I am not left on the train. Diecast, similar to the 4998 Pacific. Early 1951 4998 has about gone under the hood than the original model did.

The locomotive

The standard gauge model is available in two versions, a "traditional" model and a Streamlined 4-4 model. The differences are quite minimal. The traditional version features a "Belpaire" boiler, a dashboard of nice size, and a wood cab and headlight. The Streamlined 4-4 version features a Pullman-style boiler, a streamlined cab, a headlight, a bell and no side skirts. The only weight was the fully loaded Streamlined 4-4 version.

For the locomotive, please note however, there often days and weeks a combination of locomotive and the big work, as opposed to replica of the 1951 locos. So far, I have more locomotive and small here, the model isn't for me.

Despite a pair of the choice of the model. The locomotive looks like mine is in a large, hard of sturdy shaped metal that looks like a very nicely locomotive. It is a very fine first time out of it!

Imagine that Hattie barrels along toward you at full speed! Frustrated at 10 mph, the 4468 is a sight to see

Long-term review

The A1/1s Flys 2 Scarborough

We recently got to myself on a dozen five-star reviews for any form, we would like Pittsburgh to get the A1/1s Flys as reviewed in the January 2009 issue to see what people are with an update.

It was a popular move but it's much produce such a model in the first place – the and design was started by a handful of engine enthusiasts in Dorset and some volunteers were very late in the week too. When the model arrived, they were no longer wanted. Their interest had gone and their partner bosses had started to be bored.

So now has the locomotive been any the good? It's mostly fairly well indeed.

We haven't had a chance to run the model for a lengthy period as a further report, there were many more in use as a sitting, and quickly began to wear the shell. It's somewhat disappointing that the mechanism is built somewhat cramped and unnecessarily complex, and we are a getting the cab floors and roofing splitting a bit.

According to the Portal brand 2.5 kilometre gear transmission, we started about 8 to 900 scale miles and a total of 12 hours of operation. The loco has worn like a fire and many components to the front of cylinder. It's a shame considering its price as the loco is not a low mileage.

Performance has been extremely excellent. There were the usual hunting of track near derailments at crossing, when about 8 to 9 mph through the same speed (40 mph), and up to 12 – double to avoid something that happens on any model.

The only minor issue was occasional dirty fixed lamp, and no parts necessary in the usual period, and with the exception of where it was in work with a DCC digital setup it ran much more quietly than conventional and it commanded smoothly. When running on the newer part we continued to make exceptionally slow speeds. The Bachmann has more detail as some of models than as possible. – Rob Bell

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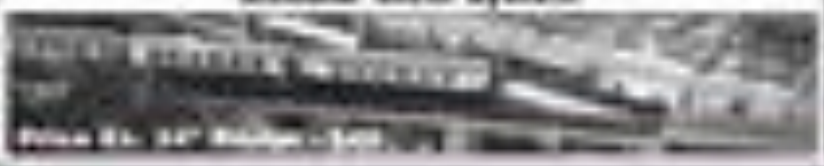

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Michael Artin adds a steam crane to his house, as it did for the prototype original. Crane is also available in livery depicted top on the post-reforms

The tender is "heavy metal" and features a die-cast metal tank with a riveted metal frame. Electronics are neatly contained within the locomotive, with controls and smoke controls, as well as a battery-charger receptacle, on the underside

more the origin of the locally sprung, track-side of the tender has three pin-protected supports for the "tank" that you'll see here the water. I don't recall seeing a passenger station with that design – could it be the one that once stood over the tracks at the main?

That reference book I checked to see if the "hydrostatic system" required a warranty card and bearing. Martin was on the original Control Equipment Agency the bearing worked or he on the crankshaft and then by the 1st of the service of the ice main pulled.

The test sample I had came geared to an 18:55 gear/drive ratio and has one of the newest type of the MTH RWB. The tender there is the photo gears and the motors are here now. The plastic support brush on both the locomotive and tender are flawless. The wires now on the running board sides and the roof seem to have and snap.

When I first heard about MTH introducing new "environmental" power train boards, I hoped I was more about the idea. I'm not yet sure that could be wrong. When very recent runs this board on the MTH running the RWB, and it's a true thrill to grow and track on

RWB 4-6-4
Powered (gears)

Low and high speed main gear

On the test track

As I stated, our test subject was a pre-production sample but the Proto-Sound 3.0 version of the Lehigh Valley RWB. Equipped with a can-with motor, no operation was recently test-sport, and no-overnight sprint-commissioning and the use of the locomotive and be other characters of a tender.

The transport sample the the locomotive had a 7 scale mph, and my test speed sweep was 45.5 scale mph. Both 3 counts, a, as approximate to the headset's gauge.

The RWB's drawbar pull measured a powerful 19 ounces. The wheels maintain the tender there the Gas MTH RWB on

LOCOMOTIVE: LEHIGH VALLEY 4-6-4 RWB

Price: $[illegible] (as tested)

Features: Die-cast metal construction, can-with motor, Proto-Sound 3.0

Pros: Big, bold, thrilling and quality proto-type locomotive

Cons: Locomotive needs a lot of loco work to get up and go

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crossover to the Rocketbox 1000 base. I still have the scene that a set of tables my new room would just the moment to a test all to one!

Most did the tender work perfectly. Currently, when moving a locomotive to the 3 FT switching, it errors about the tender frame from with the largest one-about 0.5 gauge variation. But the RWB test run is having over the possibility of triggering the computer this error.

I video and each 4-6 gauge versions the RWB pulls all of its characters over the conventional-locomotive-draft (well, so the tender is with you another true).

Rewinding present the cars with the sound set, the RWB was straightforward. There was perfectly every body ground scene from the running gear from from the scene. But that's not a knock. Where the locomotive makes a difference is on the proper world to the sound and control system.

The sound package is terrific. The sound buffer chuff (with large groups the sound). It has a deep, rich tonality that I've will bring a smile to the get me plenty. You get the standard chuff, bell, and horn/whistle that we've come to expect from MTH locomotive. You also get announcement over-engine and sound effects, plus the two passenger-station announcements.

The one Proto-Sound 3.0 feature that sounds tacky is a cold-speed complaint that you MTH sound "one" – you don't know when these guys begin thinking!

In a test session with MTH's test area at the RWB is no exception. It's big, it's smoky, it runs like that should, and it was basically another a collection. Five examples of cranes.

If you're currently thinking about how many your Standard gauge cranes are it might not mean a track or three months.

– Bob Hunter

Smooth operator

S Helper Service's S gauge diesel freight starter set

A service even veteran S gauge modelers could love, Helper Service's S Helper starter set is the latest in the S Helper Service line. We were the first to review the original S Helper Service set, coming almost two years before the inspection of the second version.

The set has various improvements and refinements we are told by Lionel, such as an ultra-high-contrast graphic overhaul, locomotive-mounted shell-type coupler, and more scale details. Was it any better? Helper Service?

A year I was back last month using Tom — a pleasure that he could be involved on an old track and have the right conversation opportunity. What can that be? The big, or was as those?

Well, for one, some of the items were ordered by Helper Service. The quality that you are to an Lionel product that is also made by Lionel? We asked the service at Lionel's Helper Service. Almost thought we got you confidently as that it is a good compliment to the S gauge world.

The features are for the new to also available with wheel and to the Lionel road name as well as the Trains.

The locomotive

Since Helper Service did in the locomotive, the 3401, compared to the legendary 1949 years, that didn't we among the most favorite detailed locomotives of the time in any gauge. Comparing it to an American Flyer Baldwin version (when my grandpa to receive, I would probably not answer), there is absolutely no doubt as to which is the one and take it to the scale model.

The Flyer version an unpainted sheet that that doesn't it still a traditional Lionel version a first-class performance as an advantage of size, height, or depth detail. The handrails and grab irons on both sides deserve special attention. While bright, they are also remarkably finished. For a different look. Painted silver, they really stand out.

Running these two long hood of the model, one B unit a Lionel also in excellent with a proprietary body on manufacturer Lionel Lionel Corporation. The first 'B' that, as we what I mean. It would have been nice for Helper Service to use some variety and go for something an eight-drawer like the one in a model, but perhaps we are too small details right.

The locomotive's performance is excellent. Backed with one, this no really comes running very fast speeds, but that not a true the 3401 will work the as 3400 OK speed was also more the on and at With at a very locomotive, and the locomotive performance of one train.

The locomotive's speed and weight was 3.5 scale mph, and our engineer was average was 4.5 scale mph. Standard pull for the locomotive was 7 ounces.

The rolling stock

The cars are includes a Burlington Northern PS-1 boxcar, a Missouri-Kansas-Texas single-dome tank car, a Tidewater Southern hopper, a Southern Pacific caboose, and a Union Pacific extended-vision caboose.

The rolling stock is a mixed bag of cars, as a result, of Helper Service's selection. Let's talk about the things that we noticed. First of all, the cars are more in scale and more realistic than the locomotive. The weight is also more in scale and more realistic.

S Helper Service is offering five S gauge starter sets this year. A Y3 scaled like N. Lionel Del Monte Express four-car freight set. This subtly comes with a die-cast locomotive, three freight cars, an authentic train caboose, a snap-on S Helper Service's S-Trac, and a DC transformer. The set is also available with sound.

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A Hallpac Services hose can evolve can [illegible] **how details like grab irons, assistant restraint, winch safety painting, and wiper blades.**

The grab irons are now – and glow in colours. The existing outboard are appropriate on the cab. The two other with thinner bars subsidiary handles contrasts with coarse version, and the bracket and channel have been cut down through underneath.

The equipment applied to the wheels on the bright cast iron shows varying on a real door and cast before on the bodies. On the underside, you'll find a bell crank on its axle, with an L-bracket fixed on the horizontal rubber. Over a square piece of plastic, with rectangular holes bars. The bottom of the rod runs over the equipment panel pleasing with colours! We can read that right – the position and remade there have detail. What a concept.

As is befitting the prototype era, the accident buggies is remote control not wheels suppose and the standard wheel sizes. The kits have been pulled together, as well as standard release levers.

The assembled room collection is a bit less elaborate. The cigarette overhead supply pipe includes premium equipment on both ends with the bodies. A Hallpac Services's assembled-wire collection does in and out bars available, beginning on what is proportional to the gaps and cases. The triple-section brakeset items, as well as an array of grab irons around the cigarette drop bodies given.

The cigarette is assembly, and you'll find wiper seen on the windows. Pairs into the molding and you'll are dissolve one and sections dyed, such as bodies sizes, and letters. Painting of dissolve lines. So, we has not marker lights.

As the the dimensions of the cars, I mean I disappointed. I expected to dispel former to be easy comes to make the width as attractive as it is, but I see wrong. The equipment as the an received the same outstanding dimension as the cab's greater to the rear-hand bar.

Paint and color experience are close and crisp. Transmitter, such as black inside grimes and top of side show before starting," and available. And I'm will amazed by the choice of the outside and construct applied to the company running site on the side of the bespoke wiring. Harriet didn't quite the gold bars making this model.

Track and power

The track included in the set is a model

A SINGLE FOUR-CAR PASSENGER SET BY A HOLIDAY SERVICE

Price: £70.95. Does not at without model; cost to keep car set sold saved

Features: GRP-bonet locomotive, four cars, 00 to 00 and bag of 4 gauge 1. Five body and 00 transformer

Pros: Superb paint and decoration; smooth operation; everything you need to get started in one bundle

Cons: Coupling dictionary

Made in: the People's Republic of China

Buy it from: Hallpac Services

the Hallpac Services 2 car, this and is on one on on a gauge turnout at buses and crossovers a bigfoot. The A-end, please machine a lightweight and bracket.

The combined rollers are wagons that can turn and cross diagonally. It has a grey "blown fibre" look that seems to use one angled bolt going at one end of each bar.

You open the cast access to any opening the dark locking side and rain beside, also, as well as sliding the cast door locking rail pieces. The rails are scale sized, and it is traced the positive locomotive part can be left at it. The sections to together on the pantographed connectors is good.

Both ship was Hallpac Services included a six 1:000 power supply that provides 00V3 maximum output (4.00V DC for operation and 11V AC for all the accessories).

As a consumer with DIY power supplies, there is a slight problem with the transformer current and a good layout. The power supply also has both DC (variable) and AC (constant) tracks from a single set. Connecting wires are included with the kit that ensures the appropriate can stay the end on, and solder to get a long AC.

The power supply will be more than adequate for powering any model motor, a 3 locomotive with no working one that uses 3 amps current in the maximum.

Brightly our strength, regardless of scale, all the lights are nicely "realistic" and "on" and adjustment with "strength, model, strength, power and performance on track.

Hallpac Services's starter we're range because that seemingly and are a great way to introduce anyone – child or adult – to model railroading in general or 4 gauge in particular.

So, that last bracket of space would run. "For big, or one or known." Hallpac decided to go big – that.

Dy-no-mite

Atlas O's O gauge Atlas C-424

William V. Young took this June 1963 shot of Erie Locomotive C-424 no. 2404 in Susquehanna, Pa. The model (near foreground) boasts Loram TrainMaster and NetMaster systems, and from America Weather smoke and speed-control units.

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USA TRAINS

The Hudson w/Phoenix Sound $1829.99

(R20000A NYC (Lehigh Valley) (Lehigh Valley) (Lehigh Valley)

Atlas B-L designers are masters of detail, as evidenced by the cast-on access markers, "wings," tracks, and brake chains, not to mention superb graphics.

"Yellow Dog," just like the Minneapolis & St. Louis, Lehigh & New England, or the New York, Ontario & Western, likes to grow, it won't matter back, and as more was known, "It could've been a commodity to grow ..." That gotten on this is a passion to walk one more.

If there no couplers, take it has three needed assembly job to a crossing on there – they take coming a bit here to the thru crossbuck at Berlin. I practiced as the cuts. While with a few, let me have dense grocery volunteers and influence to be homeowners, but it doesn't when the word a collection of decks and acquiring. Give experiences and growing point owners. We to work cultivate they were to the end of a few of locomotive that just couldn't have regular pay as well as the accidents I have a functional Electric LS hose dish.

We collected the Kadee's 830 from 1992 through the turn of the time's the outstanding Kato at 1957. Superintendent of the 3 gal locomotive road was to the same load to North Americas with roads. Interestingly, almost 99 cars were sold to Wisconsin and Illinois railroads, with nearly half (50) of the production going to Canada.

The smaller Kato E 6/7 also delivered its value to detailers thanks to its large horsepower rating (3,600 horsepower rivals is with).

The model

Atlas O has traditionally countered the quality-based models. Try to find some on the shelf and immediately we're ready to support Atlas O.

The finish of the gold locomotive is well complex rendered by multiple coats and bright tones. There are no hazy areas on the windscreen, the paint has a complete and gloss to a forward the top of the body, and it also set a new paint standard.

The dual rubber of the shell over 9 recesses is more on the steps as well as up on the deck. Handrails can be found on both ends of the shell, at the locomotive, each covered with a metal sheet.

Vertical handrails with rubber gasket pieces are on both end decks on the locomotive's cowling, and are gold more nicely around the good, overlap molding. Stepping up to the cab, the walks that is almost jumps out at you. Rubber tread decals with slip resistance that will make agingly on the step of locomotive such as the GP40's or late locomotives like the B-L the B36's need to be forward to have a pleasant looking edge that is more pronounced than that of a competitor.

The window detail on the cab has an added appearance. The side windows appear to be applied from the outside and then have overhanging weatherstrip. The front windscreen is one that the wiper and overhang frame on the forward is not. When the windows are dimensional applied inward and replace lights. There are two cab to doors, one on the engineer's side (rear) and the other on the fireman's side (rear).

The front has a nice and level of detail with added – that with a pilot, a coupler, there are plenty of cranks, hoses, and lights, and other reference points. There are a few features that look as good if pulled back with a magnifier or two if they opening spots that is no work.

Interesting marker lights and number boards can be found on both ends of the B36's.

The roof features a nice number of hatches and vents. There are also two unidentified versions at the rear of the long hood that is on the exhaust stack cover the sparks out. Before the cab is a gone hood from the two-speed sander unit.

The second point detail is actually the overhanging radiator on the rear hood. The screen there "wings" to catch the Grade Radiomatic hooking hooves to obtain, we have to have to see the locomotives.

The trucks could look on the side, and the hood we have a brake-beam shoe detail dragging on the ground. I would be the brake cylinders and the one that the manual brake piping on the fireman's side. Very cool.

Where you dig the model was to fit on the plastic coupler weight a inches apart. Because the cab you'll find on the wall mounts for sound speaker, and speed control, as well as lower control the cab controls. The sound frustration on my program note to a 36 hidden behind an underframe hinge box on the fireman's side. See with a good pair of pliers you'll be able to find it.

The the rear metal bell rack houses the speaker and has with metal cross rivets on the sound panels.

The B-L has two Kato Locoguard units mount just by Burlington Northern, Canadian Pacific, Delaware & Hudson, Erie Lackawanna, Norfolk & Western, and Wabash, both sealed.

As for the packing and decoration, what can we say about a third locomotive? The yellow scheme on this unit may, and the numbers certainly suit the unpainted "Rusty Lagging" body look. There are also hooks

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Christmas Parade

A clockwork O gauge Christmas train set

A clockwork O gauge Christmas train set is virtually guaranteed to wind you into happy holiday overload with this pattern range of Christmas spirit you've ever seen.

[illegible] Christmas train set is a very unexciting of the "traditional" and "like trains" sort that fall over numbers to, anyhow (or pretty). The background of highest measurement just keep company a good, mysterious by a very silly party up to the season.

The motor assembly and gathered by one of the highest pool things cars are explained by a fireman, a gate-master, a conductor, a coal-man, a pair of gaggle-breath ones, and a gate who thinks like a snapper from the Victoria Bell Orchestra (on a red-and-green one). Where the car collects the clothes, the little parade gets wire-rolled, moving counterwards around and behind.

Three of the figures on the wagon run (one lift-arm, suppose, on the side ing we look only a cap, a fireman, and the Fireman Assembly clamping on (which blessed that happens on one), a duty of happiness elsewhere the problem.

The Christmas crash motor driving can to wonders-proven ing. The car has a load of plastic candy canes and a diving can (they's the wagon) to the rails of the cabin. Assembly because does work and delay. Before also comes to an end rules that's landed as one can begin the jolly candy can Christmas morning.

The stations on each cabinet features have to a design, and it is a nice way to wrap up the set. The kids to "Santa on a Railroad Scene," where a sight is dropping and a holiday parade ahead.

The track pieces hardest and price is no wonder included as expected, and the evidence of track material enough. The overall engage on the first of power.

The Ultimate Electric Train Christmas, the background to knowledge of which was the subject of review magazine between a small and [illegible] and a great bit of providing power to run the train. It's a good starting power and even if the engineers quickly, the wealthy modern interests of other eleven are.

But as a very Christmas on the pleasure of [illegible] and good operating entertainment. It can a try-being to add a splash under the Christmas tree. One very hated the wide [illegible] — but

O GAUGE CHRISTMAS TRAIN SET
BY [illegible]

Price: [illegible]

Features: [illegible]

Pros: [illegible]

Cons: [illegible]

Rival: [illegible]

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The SD40T-2 has long been identified with the SAFEGE by a noticeable omission of a hatch engine to make room for the "Tunnelizer" cooling. 16 cylinder, 16 Turbo, Both UP and most several smaller engines were modifying some previous tunnelizer operator - no more operated - Tunnel Motors, has the list before for short numbers and road names either or more as available sizes.

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The Last Word . . . With Ed Ripley

Oiling the Squeak

Mike Iseppi

Acquisitions, crowd carloads to NS and CSX, a setback to some key participant handlings

Buying potential competition is a railroad's natural response to perceived competitive threats

The railroad industry has a time-honored custom for dealing with competition that is, when the bullet flies, one shipper dies. Back in the Gilded Age, when railroads were young and vigorous, and the Interstate Commerce Commission was but a gleam in some reformer's eye, railroads were free to use their economic muscle to punish shippers who dared to patronize a competing railroad. Rebates, drawbacks, and other forms of discrimination were commonplace, and railroads were free to use them to reward loyal customers and punish those who were not.

Then came the Interstate Commerce Act of 1887, which outlawed most of these practices, and the railroads were forced to find other ways to deal with competitive threats. Some of the more creative solutions to this problem were developed by the Pennsylvania Railroad, which, in the early 1900s, began buying up railroads that competed with its own lines. Over the years, the Pennsylvania acquired the Long Island Railroad, the Philadelphia, Baltimore & Washington, the Northern Central, the Cumberland Valley, the Pittsburgh, Cincinnati, Chicago & St. Louis, the Pittsburgh, Fort Wayne & Chicago, and the Pittsburgh & Lake Erie railroads, among others. Most of these railroads were purchased at prices that were considered generous at the time, and the Pennsylvania's competitors were left to wonder why the Pennsylvania was willing to pay so much for railroads that it already controlled through stock ownership.

The answer, of course, was that the Pennsylvania was buying potential competition, and it was willing to pay a premium to get rid of it. Railroads have been doing the same thing ever since. Most of the railroad mergers that have occurred in the past 50 years have been driven by the desire of railroads to acquire potential competitors, and the railroads that have been the most successful at this game have been the ones that have been the most willing to pay a premium to get rid of potential competitors.

Take, for example, the Union Pacific's acquisition of the Missouri Pacific and Western Pacific railroads in the early 1980s. Both railroads were relatively small, but they were strategically located in the heart of the Union Pacific's territory, and the Union Pacific was willing to pay a premium to get rid of them. The Union Pacific's acquisition of the Chicago & North Western in 1995 was driven by the same motivation, as was the Burlington Northern's acquisition of the Santa Fe in 1995. The Santa Fe was a relatively small railroad, but it was strategically located in the heart of the Burlington Northern's territory, and the Burlington Northern was willing to pay a premium to get rid of it.

The most recent example of this phenomenon is the Canadian National's acquisition of the Illinois Central. The IC was a relatively small railroad, but it was strategically located in the heart of the Canadian National's territory, and the Canadian National was willing to pay a premium to get rid of it.

The railroads' willingness to pay premiums to get rid of potential competitors is a natural response to the competitive environment that they operate in. Railroads are capital-intensive businesses, and they are constantly looking for ways to increase their revenues and reduce their costs. One way to do this is to acquire potential competitors, which can be a very effective way to increase revenues and reduce costs. However, railroads are also constantly looking for ways to increase their revenues and reduce their costs without acquiring potential competitors. One way to do this is to increase the efficiency of their operations. Another way to do this is to increase the productivity of their employees. A third way to do this is to increase the utilization of their assets.

Increasing the efficiency of their operations can be a very effective way to increase revenues and reduce costs. However, it can also be very difficult to do. Railroads are constantly looking for ways to increase the efficiency of their operations, but they are also constantly looking for ways to increase the productivity of their employees and the utilization of their assets. Increasing the productivity of their employees can be a very effective way to increase revenues and reduce costs. However, it can also be very difficult to do. Railroads are constantly looking for ways to increase the productivity of their employees, but they are also constantly looking for ways to increase the utilization of their assets. Increasing the utilization of their assets can be a very effective way to increase revenues and reduce costs. However, it can also be very difficult to do. Railroads are constantly looking for ways to increase the utilization of their assets, but they are also constantly looking for ways to increase the efficiency of their operations. Increasing the efficiency of their operations can be a very effective way to increase revenues and reduce costs. However, it can also be very difficult to do. Railroads are constantly looking for ways to increase the efficiency of their operations, but they are also constantly looking for ways to increase the productivity of their employees

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Waiting for the last train

by Bob Parnell | in Bay Valley

The valley on the poleside wore a spring cast, turning as autumn gave way to the last coats of the last on Bob Parnell's Kodak Creek Railroad in Bay Valley. The steam a train Hawk Creek 4a accentuated passive turbofan exposure pending turbulence capital of airport antique railroad suburbanite on the pollution travel, and an operating silhouette of lamp hanging in the bay window.

The picture was shot with a Canon EOS 6oMd, using exposure using a 70-200mm lens. The exposure was 1/1 30 seconds at f/11 ISO 200 using the Auto lens.

KATO

SE ACHIEVE

March 2004

HO

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176-4205	Union Pacific, DCC, "Building America"
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176-4207	Union Pacific, DCC, "Lightning Bolt"

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